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Post-entry Experiences of Newcomers Through the Perspective of Gamification: the Relationship Between Socialization Context and Socialization Outcomes

DOCTORAL DISSERTATION

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Naujokų patirtys po įsidarbinimo žaidybinimo perspektyvoje: socializacijos konteksto ir socializacijos pasekmių sąsajos

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GLOSSARY

Distal socialization outcomes – long-term changes in the newcomer's behavior and attitudes (Ellis et al., 2015a).

Gameful experience – the subjective perception of value or benefit derived by users from interacting with gamification elements within a digital service (Huotari & Hamari, 2017).

Gameful experience in the work environment – a psychological state where employees engage with their workplace in a way reminiscent of how players engage with games:

- **Accomplishment** – the experience of attaining clearly defined goals and achieving recognized standards of excellence within a professional setting;
- **Challenge** – the experience of being stimulated to push personal boundaries and abilities within a professional setting;
- **Competition** – the experience of rivalry and competitive dynamics within a professional setting;
- **Guidance** – the experience of receiving directional clarity and evaluative feedback within a professional environment;
- **Immersion** – the experience of full attentional and emotional engagement within a professional setting;
- **Playfulness** – the experience of engaging in imaginative and spontaneous behavior that is self-driven within a professional setting;
- **Social experience** – the experience of interpersonal connectedness and communal belonging within a professional setting.

Gamification – the use of game elements in non-game contexts (Deterding et al., 2011).

Identification – a commitment driven by the motivation to maintain positive relationships within the organization (O'Reilly & Chatman, 1986).

Interaction with gamification elements – active engagement of individuals with game-like features integrated into non-gaming contexts.

Internalization – a commitment resulting from a perceived alignment of individual values and organizational ideas (O'Reilly & Chatman, 1986).

Job satisfaction – a positive affective state resulting from an appreciation for one's job or work experience (Locke, 1976).

Leader-member exchange theory (LMX) – a theory proposing that leaders develop various forms of relationships with their subordinates, as defined by the quality of their working relationship (Graen & Uhl-bien, 1995).

Newcomers – "employees who have worked for their organizations for less than 1 year" (Liu et al., 2021, p. 4).

Occupational stress – "harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker" (Hurrell, 2011, p. 296).

Onboarding – "all formal and informal practices, programs, and policies enacted or engaged in by an organization or its agents to facilitate newcomer adjustment" (Klein & Polin, 2012, p. 265).

Organizational culture knowledge – comprehension of the corporate culture and the functioning of the organization (Ellis et al., 2015a).

Organizational socialization – "a learning and adjustment process that enables an individual to assume an organizational role that fits both organizational and individual needs" (Chao, 2012, p. 582).

Proximal socialization outcomes – outcomes that indicate how well a newcomer is adjusting to a new position within a new workplace (Bauer & Erdogan, 2012).

Role clarity – an extent to which an individual is certain about what is expected of them in their job performance (Teas et al., 1979).

Social capital resources – a group of socialization resources that include social events, socialization agents, supervisor support, and relationship development (Saks & Gruman, 2012).

Social integration – a degree to which a newcomer feels assimilated into the group (Kammeyer-Mueller & Wanberg, 2003).

Socialization context – a set of sociodemographic, job-related, and organizational factors (including implemented gamification elements) that are related to employee socialization.

Socialization resources theory – a theory proposing that new employees need different resources at different stages of socialization in order to adapt successfully to a new position, team, and organization (Saks & Gruman, 2012).

Task mastery – a self-evaluation of one's ability to carry out job responsibilities effectively (Kammeyer-Mueller & Wanberg, 2003).

Turnover intentions – employees' intention to begin planning and considering departing their current position and organization for various reasons (Mobley et al., 1979).

Work related resources – a group of socialization resources that include job resources, personal planning, training, assignments, information, feedback, and recognition and appreciation (Saks & Gruman, 2012).

INTRODUCTION

Starting a new job is a significant milestone for both the individual and the hiring organization. How a person adjusts to a new work environment can lead to various benefits. For example, someone who adapts well will probably feel satisfied with their job, be comfortable among colleagues, and fulfill their full potential. The organization also gains from the smooth integration of new employees. The quicker someone fits into their role, the faster the company can enrich its human capital and expect a return on investment. Research supports this by showing that successfully integrated employees are often more productive, have positive attitudes toward work, and are likely to stay longer with the company (Bauer et al., 2007).

Such a transition from an outsider to an insider within an organization is known as *organizational socialization* (Bauer et al., 2007). Soon after employment, the new hires become familiar with their work responsibilities, coworkers, and the organization. They also form early impressions of the new environment and evaluate the relevance of the job to their expectations and the long-term chances of remaining in the company (Wanberg, 2012). This process is naturally complex because numerous factors might impact the success of a newcomer's integration. However, it is important to note that newcomers' socialization also occurs in a dynamic work environment, which presents unique issues and challenges.

Relevance of the thesis

Technological, social, economic, and societal changes significantly impact employees' behavior. On the one hand, the blend of work into personal spaces and times is now more prevalent, driven by the demand for continuous connection through digital platforms (Gregg, 2011). On the other hand, human resource management is facing new and substantial concerns due to the rising tendency of employees to stay with one company for shorter and shorter periods (Luca, 2016). Younger people have a high level of self-awareness, yet they lack loyalty to their employers and tend to switch jobs frequently (Lee et al., 2017). Companies' long-term competitiveness in the market is threatened by this tendency, which raises human resources-related expenses due to frequent recruiting and training (Park & Shaw, 2013). Differences in employee expectations can also be observed. For instance, Generation Z, now entering the workforce, prefers self-directed and technology-assisted learning (Chillakuri, 2020). They anticipate receiving in-depth training at the beginning of a new job, which provides them with the necessary tools, procedures, and technology to contribute immediately and work

independently. This generation values technical and interpersonal skills, favoring employers who offer opportunities for continuous learning and a high degree of autonomy in their positions. Additionally, one should emphasize the importance of non-traditional types of work. The increasing popularity of remote work poses challenges for integrating new employees. It is associated with a higher likelihood of turnover, particularly when remote workers feel disconnected from the organization and perceive fewer opportunities for career growth (Hopkins & Bardoel, 2023). Considering all this, modern companies are under increasing pressure to develop innovative and engaging strategies for retaining their human capital over the long term.

Gamification is one of these practices, gaining widespread acceptance in recent years as an approach to enhancing various organizational processes. The idea that gamification could increase employee motivation, engagement, and performance has contributed to its rapid spread in businesses (Nah et al., 2019). It is also important to note that gamification is not only purposefully implemented in the workplace, such as by making work activities more game-like or gamifying employee compensation systems; numerous cases of work software, as well as software in other areas, are being developed with gamification elements in mind (Larson, 2020), which contributes to more and more employees encountering this phenomenon.

Even though gamification is being used in a wide variety of businesses, its efficacy is still being called into doubt. Although slowly, a growing body of scientific research is analyzing the concept of gamification in the workplace. In some circumstances, gamification may result in favorable outcomes (e.g., Hussain et al., 2018; Gerdenitsch et al., 2020; Basit et al., 2021; Silic et al., 2020; Girdauskienė et al., 2022); whereas, in other instances, it may have no effect (e.g., Johnson et al., 2020; Hamza & Tóvölgyi, 2022); yet, in some other cases, it may even result in undesirable outcomes for employees (e.g., Algashami et al., 2019; Hammedi et al., 2021; Nyström, 2021).

In addition, gamification is an interdisciplinary field, with research available from management, education, psychology, and other disciplines. This suggests that scholars can use various approaches to operationalize this concept. According to Landers and Marin (2021), empirical research on gamification interventions in the workplace generally lacks a detailed examination of the design processes involved, which they see as a major flaw in the current literature. It is challenging to build upon previous studies without defined guidelines or replicable methods.

As a result, organizations apply gamification with varying degrees of success, and even these outcomes are being subjected to close reexamination.

Despite this uncertainty, organizations will likely keep implementing gamification – justifiably or not – and, consequently, new employees will inevitably enter this environment where gamified work processes are in place. The existing body of research investigating the relationship between gamification and new employees' socialization is relatively small and primarily concentrated on the onboarding process (e.g., Heimburger et al., 2020; Bell et al., 2020). Therefore, the consequences of interacting with gamification elements for new employees are unknown. Positive results from previous research may extend to newcomers, indicating that gamification effectively addresses employee integration issues. However, gamification may have no effect, which would mean organizations are misusing resources. Additionally, one cannot ignore that gamification may not be an effective way to enhance work processes, and that it might even pose risks to the work aspects of new employees. Therefore, this thesis aims to explore the relationship between the newcomers' socialization context and their resulting outcomes from a gamification perspective.

Scientific novelty

This thesis substantially contributes to the current body of research on employee socialization and gamification by broadening its focus from onboarding experiences to a more comprehensive understanding of organizational socialization. Scholars raising assumptions about the incompleteness of this field emphasize that it is essential to assess how corporate values and cultural norms are communicated through modern technologies and digital tools (Ellis et al., 2015a).

Existing research on gamification and new employee onboarding is often quasi-experimental (e.g., Brull et al., 2017; Burns, 2019). Typically, gamification is used as an intervention to evaluate the socialization of new employees, such as by introducing a gamified learning program or a gamified mobile onboarding application. Nevertheless, according to Wanberg (2012), organizational socialization does not conclude with employee orientation or onboarding programs; the learning process continues as employees gain a more profound comprehension of their job roles and responsibilities. Existing theories on employee socialization tactics (Van Maanen & Schein, 1979) imply that the initial experience of new employees can vary considerably, as can the scope, duration, and content of socialization approaches. Therefore, when investigating gamification in isolation, one can only conclude on the efficacy of the specific program applied, as opposed to the broader process of socialization, which can be ongoing and indefinite (Katz, 1980; Taormina, 1997).

The conceptualization of gamification itself is another issue frequently encountered in the literature review of workplace gamification. Gamification is often generalized solely through structural elements (e.g., Girdauskienė et al., 2022). However, a shifting perspective on gamification suggests that examining gamification elements in isolation is insufficient without considering the psychological effects they induce (Huotari & Hamari, 2017). Even when the gameful experience is evaluated, it is sometimes regarded as a unidimensional construct (e.g., Schmidt et al., 2023), which complicates the reproducibility and applicability of the results. For instance, it would be challenging to consolidate factors such as a sense of competition or playfulness into a single construct and evaluate their impact on various variables in an organizational context.

When analyzing the application of gamification in the workplace, one can also observe that gamification is frequently viewed as a standalone approach. Research studies do not address the multifaceted nature of gamification. It is entirely possible for an organization to implement both gamified managerial practices and gamified software, thereby making the degree of gamification in a natural work environment highly varied. This complexity is highlighted when examining the user experiences induced by gamification, where it is noted that they do not necessarily stem from a single source (Högberg et al., 2019).

This thesis addresses all the issues mentioned earlier by constructing a thorough study, further enriching the gamification and socialization research with new insights. It introduces a comprehensive concept – gameful experience in the work environment – that captures a broader spectrum of experiences potentially generated by gamification in the workplace. This includes the impact of diverse sources of gamification, as well as elements not directly related to gamification. Furthermore, an assessment tool compatible with this concept has been developed – a scale measuring gameful experience in the work environment – that meets all necessary psychometric criteria. The study also involved a diverse group of new employees from different sectors across two countries, broadening the relevance and applicability of its findings.

Practical implications

In a broad sense, this study examines how gamification elements used in the workplace relate to new employees' socialization. Therefore, the obtained results provide valuable insight for businesses determining which gamification aspects lead to desirable or undesirable socialization outcomes. This allows companies to conduct thorough analysis and reevaluation of their

current gamification practices. The identified dynamics enable estimates of what is being done correctly or could potentially lead to undesirable outcomes in the future. Consequently, various organizational interventions, such as new hire orientation programs and onboarding procedures, may be developed by using the insights gained from this research. In creating these interventions, the main emphasis needs to be on the experiences that new employees are intended to undergo. Following this, organizations can choose appropriate gamification elements to induce them. The results of this study precisely show which experiences lead to specific socialization outcomes. Overall, the findings offer actionable insights that enable companies to be more strategic in their approach to employee socialization, optimizing both the process and its outcomes.

Structure of the thesis
This thesis is divided into five sections:
1. The first section consists of a comprehensive review of scientific literature covering the theoretical aspects of organizational socialization and gamification. Based on this review, assumptions for the research study are formed, leading to the creation of the research model and articulating the study's aim and objectives.
2. The second section of the thesis provides a detailed description of the research design, which includes the sample size, the measures used, and the criteria for data analysis. This serves as the methodological framework for the study.
3. The third section is organized according to the established research objectives, presenting all the statistical calculations carried out during the study. This ensures that the research data are clearly laid out, allowing for straightforward interpretation and analysis.
4. The fourth section analyzes the results obtained, providing insights into what the collected data reveal and how they relate to the theoretical assumptions discussed earlier and offers practical recommendations.
5. The thesis is concluded with a set of formulated conclusions which summarize the key findings.

Thesis statements:
1. Within the overall context of workplace socialization, the direct relationship between newcomers' interaction with gamification elements and their socialization outcomes is potentially

overshadowed by other contextual factors or by the newcomers' perceptions of experiences related to gamification.

2. The importance of gameful experience in the work environment to socialization outcomes should be analyzed from a broader perspective, incorporating other aspects of the socialization context rather than solely focusing on the newcomers' interaction with gamification elements.

1. THEORETICAL BACKGROUND

1.1. Theoretical Assumptions of Organizational Socialization

Despite the fact that employee socialization has been studied since the later part of the 20th century, no unified theory exists to explain this phenomenon. Initially, the field of organizational socialization was fragmented, with several directions and concepts focusing on different aspects of the socialization process. Over time, researchers and theorists attempted to create more cohesive models by integrating these diverse perspectives. However, according to Saks and Gruman (2012), the concept of organizational socialization is still fragmented and inadequate due to a lack of attention paid to the socialization practices used by modern organizations. Considering this, the following section will provide a deeper analysis of the theoretical basis of employee socialization.

1.1.1. The concept of organizational socialization

The first mention of organizational socialization was made by Bakke (1953, as cited in Wanous, 1992), who described organizational socialization as part of the joining process between a person and an organization. Such a synthesis was thought to be a reciprocal phenomenon: throughout socialization, the organization shapes the newly employed individual, who, in turn, impacts the corporate culture. This concept has evolved over time. Later definitions reconceptualized organizational socialization as a social learning process, emphasizing the role of other organizational members in shaping an individual's perception of the work environment, behaviors, and attitudes (Luca, 2016). However, this concept not only encompasses the influence of organizational insiders, but also pertains to a process through which a person obtains the information, skills, attitudes, and behavioral patterns required to adjust to a new work role (Wanberg, 2012). Therefore, Chao (2012) defines organizational socialization as "a learning and adjustment process that enables an individual to assume an organizational role that fits both organizational and individual needs" (p. 582). Given its wide range of applications, this definition will serve as the foundation for this research[1].

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[1] For the purpose of clarity and convenience in this thesis, the terms 'organizational socialization', 'employees' socialization' (which includes 'newcomers' socialization' and 'new hires' socialization'), and 'socialization' will be used interchangeably, except where specified otherwise. Furthermore, within the context of this thesis, the terms 'adaptation' and 'adjustment' are utilized exclusively when

Employee socialization begins when boundaries are crossed between the outside and the inside of an organization (Ashford & Nurmohamed, 2012), signifying the moment when new hires enter a new workplace. However, Wanberg (2012) notes that this process occurs *within* the new employee; hence, it relates to the internal processes of change experienced by newly hired personnel. Chao (2012) also adds that both the organization and the newcomer play active roles in the socialization process, as it involves efforts from both parties to facilitate it. Furthermore, the author states that "the adjective *organizational* describes where the socialization occurs, or the context of socialization, rather than who or what is socializing" (Chao, 2012, p. 582). In other words, it denotes the setting or environment – that is, an organization – where socialization takes place. This shifts the emphasis from the particular individuals (e.g., managers or coworkers) or the particular activities or behaviors (e.g., training programs, meetings, or daily work interactions) that comprise the socialization process to the socialization context as a whole. Therefore, it can be concluded that organizational socialization implies a new hire's internal change as it manifests in the overall setting of the organization.

In simple terms, organizational socialization shares many similarities with the general concept of socialization: in line with how individuals in a society adopt communal norms and values, employees in an organization adapt to its unique cultural and operational environment. During this process, the organization ensures a diverse pool of human capital, enabling individuals with varied goals, values, and worldviews to collaborate effectively. This diversity not only fosters collective achievement but also supports the fulfillment of individual needs. For this reason, Luca (2016) also characterizes newcomers' socialization as a social control mechanism that aims to align individuals and organizations.

To better understand the socialization process that new hires undergo, researchers often refer to the uncertainty reduction theory (Berger & Calabrese, 1975). New employees experience significant ambiguity when they first join an unfamiliar environment. This situation generates tension and encourages newcomers to seek ways to reduce uncertainty in the work environment, aiming to make it more predictable, understandable, and controllable. This ambiguous state is often alleviated by collecting information, primarily from supervisors and colleagues. Organizational socialization programs usually follow this theory's principles to reduce

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researchers refer to their theoretical frameworks or research outcomes using these precise terms. It is important to clarify that these terms are distinct and not used interchangeably with 'socialization'.

employees' doubts and anxiety. When uncertainty decreases, employees can perform their given responsibilities more efficiently, are more satisfied with their jobs, and are likelier to remain with the organization longer (Morrison, 1993). Similar assumptions are made by Allen (2006), who, drawing from the Field Theory (Lewin, 1951, as cited in Allen, 2006), states that entering an organization as a newcomer can be likened to stepping into an unstructured psychological field. This process requires the creation of a cognitive map in order to establish some order and a structure. Newcomers typically encounter disorientation and a necessity to comprehend their unfamiliar surroundings. Therefore, implementing efficient socialization strategies is essential for establishing a structured environment for newly hired personnel.

It is important to note that, in the organizational context, the term 'onboarding' is often used to describe the aftermentioned strategies. Though onboarding and organizational socialization are sometimes used interchangeably, the latter is a broader and more complex concept. According to Klein and Polin (2012), onboarding refers to "all formal and informal practices, programs, and policies enacted or engaged in by an organization or its agents to facilitate newcomer adjustment" (p. 268). In contrast, organizational socialization encompasses a broader array of post-entry experiences. As stated by Van Maanen & Schein (1979), it includes almost everything that occurs after an individual has been recruited; therefore, this could range from the dynamics of individual internal changes (Wanberg, 2012) to the learning process (Wanous, 1992) and the development of organizational identity (Bauer et al., 2007). Organizational socialization differs from onboarding in that it concerns how an individual adjusts to their work environment under the direction of both the organization and themselves (Chao, 2012). In other words, onboarding represents an organizational effort aimed at facilitating the integration of newcomers. Klein and Polin (2012) also hypothesize that socialization can occur irrespective of onboarding activities, which may not always facilitate or even aid socialization. As a result, it is reasonable to conclude that, while onboarding can be a part of the organizational socialization process, these terms should not be equated.

Socialization-related key events more accurately reflect this scope difference in terminology. Considering the historical context, the trajectory of organizational socialization was initially delineated through stages that explicitly describe how newcomers progressively become fully integrated members of their organizations. However, the precise separation of these phases is problematic, as their classification can be based on either time intervals or the occurrence of particular events (Wanous, 1992). While there are models of employee socialization that are segmented by time intervals

(e.g., Buchanan, 1974), stages of socialization are typically characterized by the pivotal moments that occur within them. One such model was created by Feldman (1976), who summarized and identified three distinct phases of new employee integration within an organization in his study of community hospital personnel:

1. 'Getting in'. According to the author, the socialization process begins prior to the newcomer's employment with the organization. This refers to an individual's exploratory actions during the job searching process, or when deciding whether to accept a particular job offer. During this phase, the potential employee must form a realistic impression of the nature of the work, its environment, and other factors and evaluate how well they correlate with individual expectations and opportunities for self-actualization. Other researchers refer to this stage as anticipatory socialization (e.g., Linden et al., 2004).

2. 'Breaking in'. Individuals entering a new organization aim to fit into the work environment. To achieve this goal, Feldman (1976) identified four essential tasks a new employee must undertake: establishing relationships with managers and co-workers, learning job tasks and procedures, clarifying their role within the organizational context, and evaluating their progress. Given these considerations, a successful socialization process would indicate that the new employee feels accepted by other organization members, is confident in performing the assigned tasks, can organize activities independently, and their evaluation of performed work tasks and achieved progress aligns with the organization's evaluations. This phase is also referred to as the entry phase or accommodation (e.g., Linden et al., 2004).

3. 'Settling in'. After completing the tasks of the second stage, the newcomers encounter two distinct types of conflict. The first involves balancing work and personal life. In contrast, the second involves work-related issues arising from interactions with co-workers. Successful resolution of these conflicts indicates the third stage's success. Other authors alternatively refer to this stage as assimilation (e.g., Linden et al., 2004).

Feldman's (1976) model indicates that organizational socialization characterizes a gradual process of change which begins even before employment (Chao, 2012). Although it makes it possible to pinpoint important socialization moments and anticipated issues, such stage-based models as Feldman's (1976) are criticized in academic literature for having rigid frameworks and failing to pay enough attention to individual differences

among newcomers (Kramer & Miller, 1999). It is improbable that all new hires will advance at the same rate and pace. Moreover, these models are descriptive and do not explain the internal mechanisms facilitating the transition from one stage to the next.

An alternative perspective sees organizational socialization as a continuous process and emphasizes changes that take place in various domains. It highlights that the dynamics of these changes may manifest at various paces and degrees of intensity. Such principles are elaborated by Taormina (1997), who states that organizational socialization integrates numerous aspects, making it necessary to investigate the content of this phenomenon. The author also emphasizes that employee socialization, as a continuous process, can be evaluated throughout employment within a singular organization. Taormina (1997) specifies the four dimensions of organizational socialization as follows:

1. 'Training': the acquisition of job-related skills. It refers to the act or process by which employees acquire the functional skills required to perform their work responsibilities. This can occur in formal and informal settings and is important to an organization's socialization efforts. The effectiveness of such training varies across organizations and even among employees within the same organization, depending on factors such as employee anxiety and self-efficacy.

2. 'Understanding': comprehending the organization's functioning and the work's specifics. This domain incorporates multiple subcomponents, such as role-related learning and culture learning, and an extensive range of cognitive aspects within the work environment. These include role clarity, reality shock, adaptation to group norms, and acquiring multiple types of information, such as technical, social, and cultural insights.

3. 'Co-worker support': the formation of relationships with co-workers. This dimension is characterized as the emotional, moral, or instrumental support which colleagues provide to alleviate negative emotions such as anxiety, fear, or doubt. The absence of co-worker support can result in adverse outcomes, from social isolation to resignation, highlighting its essential role in successful socialization. This type of support is fundamental because it acts as a buffer against stress, which can impede an employee's socialization and ultimately impact their performance and job satisfaction.

4. 'Future prospects': the thoughtful consideration of career opportunities and the intention to continue one's career within the organization. This socialization domain focuses on an employee's

expectations for career advancement and compensation within the current organization. These expectations, which include salary, promotions, and employment security, impact an employee's decision to remain or depart. Understanding this domain is important for organizational researchers and human resources professionals, as it significantly affects employee retention and job satisfaction. Therefore, this dimension functions as an important indicator of long-term commitment and the overall success in organizational socialization.

As Taormina (1997) acknowledges, his socialization model is intended to demonstrate the interconnected nature of the four domains to achieve a holistic understanding of organizational socialization. However, this overlap between domains may make isolating specific factors for a targeted study or intervention difficult. Nonetheless, Taormina's (1997) model shares some content similarities with Feldman's (1976) model, as they both emphasize the necessity of role clarity and skill acquisition, the importance of colleagues' support, and the focus on long-term integration – all of which are important for effective newcomer incorporation into an organization.

In essence, it can be stated that organizational socialization is a long-term process which is characterized by sequential changes occurring in an individual after entering the organization. However, the expression 'long-term' should be used with reservation, as there is currently no consensus on the duration of the socialization process. Ellis and others (2015a) emphasize that newcomers' most dynamic internal changes occur within the first 30 days; afterward, the process progressively stabilizes and unfolds over the newcomer's first year. Katz (1980) argues that new employees need sufficient time to feel accepted and competent in performing their work duties. Therefore, the duration of socialization depends on the employee's skills, needs, and prior work experience, and also varies by the job field. In addition, the author observes that organizational socialization as a process can sometimes span a person's entire career, which is in line with Taormina's (1997) notion that it is a continuous process throughout one's tenure in a single organization. It can be noted that the aforementioned model by Feldman (1976) implies that socialization should conclude with the assimilation phase. However, other researchers (e.g., Linden et al., 2004) suggest adding a final stage, referred to as the disengagement or exit phase, which is marked by the termination of the employee's relationship with the employer. This further emphasizes the idea that organizational socialization should not be constrained by time. Nevertheless, Ashford and Nurmohamed (2012) argue that researchers should establish specific boundaries for the timeframe to

maintain the essence of socialization; otherwise, the discussion would merely revolve around employees' continuous learning in the organization. The focus of these boundaries is not on specific time intervals but rather on socialization outcomes which, in turn, depend on the socialization approach utilized – ranging from what knowledge and skills new employees have acquired to long-term effects beneficial to the organization, such as newcomers' commitment and their likelihood of staying.

From a scientific research standpoint, the ambiguity surrounding the length of time that employees' socialization occurs may appear to be a source of concern. It prompts a question of what or when socialization outcomes should be measured. However, it is noticeable that, in scientific studies, there are not only different viewpoints on the time(frame) when to analyze employee socialization best, but also there are established traditions regarding the duration of research. For instance, Major and others (1995) analyzed indicators of employee socialization four weeks after employment, suggesting that the effects of this phenomenon manifest relatively quickly. According to Adkins (1995), measuring socialization outcomes six months after employment is appropriate. The organizational socialization characteristics were studied throughout a range of time intervals in empirical studies, such as one year (e.g., Gruman et al., 2006; Adkins, 2006; Lapointe, 2014; Raišienė et al., 2019; Liu et al., 2021), or more than one year (e.g., Jokisaari & Nurmi, 2009). Bauer and others (2007) determined in their meta-analysis that the prevailing time intervals for investigating this phenomenon are as follows: entry, three months, six months, nine months, and one year subsequent to entry. In fact, the one-year mark is commonly applied as a research endpoint. According to Allen (2006), the conventional one-year period is the primary timeframe for studying socialization, thereby highlighting that activities within the first year are often seen as having the most significant and prominent effects. This notion is also upheld by Raišienė and others (2019), who state that evaluating participants whose job tenure does not exceed 12 months is optimal for respondents to assess their socialization process and its key determinants. Furthermore, considering the fact that organizational socialization focuses predominantly on newcomers, the choice of a one-year research period may also stem from how newcomers are defined. For instance, Liu and others (2021), building on previous works, state that "newcomers are defined as employees who have worked for their organizations for less than 1 year" (p. 4). This time frame is also evident in studies examining socialization among employees with various job tenures. For instance, Dzimidienė and Bagdžiūnienė (2015) used the one-year threshold as a reference point to compare different groups of employees – those who have been employed for

less than one year and those who have been employed for over one year. Although it is conventional practice in socialization research to use a one-year endpoint, its suitability is not universally agreed upon (Allen, 2006). As a result, the time limit for investigating socialization should be determined by the nature of the research itself.

Such flexibility is supported by Ashforth (2012), who suggests that there is no single method or approach that can be universally applied in organizational socialization research; instead, researchers must consider the specific aspects of each situation and adapt the methodology accordingly. This includes comprehension of varied contexts and diverse individuals (and the interactions between the two), a range of existing work roles, socialization practices, formative events, and socialization outcomes. Such a notion leads to the conclusion that, in order to understand organizational socialization, it is important to take into account the specific socialization context in which this process occurs. After all, as Raišienė and others (2019) state, the main focus should be placed on how employees become a genuine part of the organization, i.e., under what conditions newcomers are assimilated into the organization and what individual incentives influence their socialization. Therefore, the subsequent parts of the literature analysis will be dedicated to analyzing socialization outcomes that capture the essence of this process and what factors in the overall socialization context have the most impact on them.

Core insights for constructing the research framework:
- Organizational socialization, despite indicating the dynamics of an individual's change process, should not be separated from the context in which it occurs.
- Organizational socialization should not be equated with the organization's efforts to socialize newcomers, such as onboarding processes.
- Organizational socialization can be related to job tenure only in the sense that the most dynamic processes of socialization occur at the point of entry into the organization. Beyond this initial phase, the endpoint of socialization remains ambiguous (if it indeed exists). Nonetheless, from a practical standpoint, it is important to measure the outcomes of socialization in order to evaluate its effectiveness accurately, and the first year of work is a valid term for such an aim.
- The timing for measuring socialization outcomes depends on the nature of the research itself.

1.1.2. Outcomes of organizational socialization

After analyzing the conceptual principles of newcomers' socialization, it can be stated that this process is change-oriented. Therefore, it is important to clarify what makes this change successful or unsuccessful. Academic research frequently poses the question of how to define the successful socialization of a new employee. However, consensus regarding this particular aspect remains elusive. According to Bauer and others (1998), the components of effective employee socialization vary based on the field of work, the characteristics of newcomers and organizations, and the cultures of different countries. However, since successful socialization is associated with favorable outcomes for new employees, managers, and organizations (Bauer et al., 2007), it is reasonable to assume that the outcomes of socialization serve as a basis for its effectiveness. These indicators help clarify the direction and trajectory of the socialization process. Considering that the socialization process is inherently extended over time, its outcomes are typically classified as either proximal or distal (Kammeyer-Mueller & Wanberg, 2003).

1.1.2.1. Proximal socialization outcomes

The proximal outcomes of organizational socialization indicate the effectiveness of new employees' progression in their new job roles (Bauer & Erdogan, 2012). These outcomes, also referred to as adjustment indicators, are typically evaluated at the start of the socialization process. From these, preliminary assumptions about the effectiveness of a newcomer's socialization can be made. The primary focus of the proximal socialization outcomes is learning. The immediate results effectively reveal the extent to which newcomers have learned the required knowledge and skills for successful performance in their new job positions (Kammeyer-Mueller & Wanberg, 2003).

Role clarity
One of the primary proximal outcomes of employee socialization is role clarity. It refers to the extent to which an individual is certain about what is expected of them in their job performance (Teas et al., 1979). Role clarity is characterized as a reactive construct. It indicates that the newcomer knows how the organization and its members conceive what they should be doing. Role clarity takes three distinct forms: understanding job-specific responsibilities, knowledge of job priorities and performance objectives, and comprehension of the preferred techniques for task completion (McShane et

al., 2021). Knowing one's role in the organization is especially important given the trend in organizations toward less clearly defined job roles. Employees who clearly understand their roles are more productive and precise because they know where to focus their efforts (Bauer & Erdogan, 2012). Role ambiguity, a term that describes a lack of role clarity, on the other hand, wastes employees' time and effort because they may perform the wrong duties or utilize the incorrect techniques. Role clarity also facilitates coordination between team members and stakeholders, ensuring synchronized completion of tasks. In addition, this factor improves employee motivation by increasing their assurance that their efforts will produce the desired outcomes (McShane et al., 2021). Role clarity is a significant indicator of certain long-term socialization outcomes. It is consistently linked with job satisfaction (Adkins, 1995; Bauer & Green, 1998), organizational commitment (Lapointe et al., 2014), job performance (Zhou et al., 2022), and positive adaptation results (Bauer et al., 2007). According to Ashforth (2001), understanding one's function and the surrounding organizational context is essential for fulfilling deeper emotional and psychological needs, such as a need for a sense of purpose or control over one's work environment. Achieving job satisfaction and productivity becomes difficult without this role clarity, as these important personal and professional well-being needs remain unmet.

Taormina's (1997) socialization framework classifies the development of a newcomer's role under the 'Understanding' domain, by emphasizing the rapid growth of comprehension upon joining an organization. A new employee may struggle to find information at first, but this will gradually improve. However, finding trustworthy sources can quickly improve their comprehension. There is an inverse relationship between information seeking and understanding; more information seeking corresponds to less understanding, but as more information has been gathered, understanding grows. This idea is supported by research showing that when important knowledge is easily accessible, newcomers quickly achieve a higher level of role clarity. According to Frögéli and others (2023), formal onboarding programs and structured training at the beginning of one's job are effective in improving role clarity. Furthermore, Bauer and colleagues' (2021) longitudinal study discovered that new employees with a proactive personality and pre-existing organizational knowledge report higher levels of initial role clarity, thereby highlighting the importance of personal resources in adapting to new job roles.

Task mastery
Another important proximal outcome of employee socialization is task mastery, which refers to self-evaluation of one's ability to carry out job

responsibilities effectively (Kammeyer-Mueller & Wanberg, 2003). In line with the notion that effective performance leads to positive work attitudes (Judge et al., 2001), task mastery can make new hires more likely to feel enjoyable work experiences and less likely to desire to leave their position. Sometimes, this concept is referred to as performance self-efficacy (Bauer & Erdogan, 2012). Bandura (1997) indicated that self-efficacy can lead to greater performance. Based on this, high self-efficacy encourages engagement and goal-setting. It also promotes high levels of effort to achieve these goals. It can be assumed that these factors would contribute to task mastery, especially in an organizational setting. In their research, Gruman and others (2006) observed that task mastery relates most strongly with self-efficacy compared to all other socialization outcomes. The complexity of the occupation is another significant aspect. Capitano and others (2022) observed that the more complex a job is, the longer it takes to achieve the optimal levels of task mastery for new employees. In their longitudinal study, Frögéli and others (2022) observed that task mastery had substantial long-term effects on the socialization of newcomers. Specifically, newcomers with high levels of task mastery reported significantly reduced stress levels, and, in general, task mastery was associated with decreased levels of strain. Moreover, individuals with higher perceptions of task mastery demonstrated fewer signs of burnout after one year of employment. Finally, Kammeyer-Mueller and Wanberg (2003), after observing a weak relationship between task mastery and organizational commitment, concluded that task mastery is more related to the work domain than the organizational one.

Taormina (1997) proposed the 'Training' domain which focuses on how new employees develop job-related skills. However, task mastery is more than just learning skills; it also includes evaluating how those skills are used in practice. This aspect is more consistent with the notion of socialization tasks proposed by Feldman (1976), which underscores the need for new employees to develop the ability to evaluate the work tasks they carry out. According to Taormina (1997), skill acquisition occurs most prominently at the start of a new job, especially when a formal training program is in place. However, learning does not stop there; new employees are likely to continue learning about their jobs informally. In a review conducted by Frögéli and others (2023), it was determined that the implementation of formal training programs for newly hired personnel increases the likelihood that they will subsequently experience greater confidence in their capacity to carry out their assigned duties. However, other variables, including the new employee's prior work experiences and proactive nature, also play a role in this. Morrison (1993) discovered that employees exhibited greater levels of task mastery when they

proactively sought technical information and requested feedback. Conversely, a study conducted by Bauer and others (2021) revealed a comparable outcome: newly hired personnel who had prior affiliations with their present place of employment, such as temporary or contract work, demonstrated greater task mastery.

Social integration

Proximal socialization outcomes also include social integration, which refers to the degree to which a newcomer feels assimilated into the group (Kammeyer-Mueller & Wanberg, 2003). When new employees feel welcomed and accepted by their colleagues, they are likelier to feel like they blend in and understand their responsibilities. This sense of belonging can be characterized as a situational identity, which indicates that the individual has successfully adapted to their new environment (Reichers, 1987, as cited in Kammeyer-Mueller & Wanberg, 2003). Such a sense of belonging helps them better adjust to their immediate social context and increases their commitment to the organization. Establishing connections with peers and feeling connected to them increases attachment to the organization and, as a result, job satisfaction, performance levels, and intention to remain (Bauer et al., 2007). In conclusion, feeling accepted by existing team members can be more than just emotionally reassuring for new employees; it can also be advantageous from a practical standpoint. When newcomers feel accepted into the group, they are more likely to gain access to vital information that can improve their performance and facilitate their integration (Ellis et al., 2015a).

Social integration is closely connected to Taormina's (1997) 'Co-worker Support' domain. While social relationships are dynamic, the author argues that the degree of support given to newly hired personnel by their peers is likely to persist consistently throughout the course of their employment. This level of support may range from person to person, presumably due to personality differences, but it generally stabilizes for each individual. Taormina (1997) states that because people acquire impressions of others very quickly, new employees rapidly determine with whom they wish to form friendly relationships. As a result, a newcomer's level of social support is established early on, frequently within the first few weeks of employment. Also, Morrison (1993) found that active pursuit of normative information, which helps newcomers better understand the norms, values, roles, and behaviors expected of them in their new environment, is linked to new hires' improved social integration. Nonetheless, the job position may occasionally have a detrimental effect on the social aspects of integration. Bauer and others (2021) discovered that newcomers in higher job levels (those with a higher

hierarchical position within the company) had lower levels of social acceptance.

Organizational culture knowledge
The final proximal socialization outcome is the knowledge of organizational culture. It indicates how well individuals comprehend the corporate culture and how the organization functions (Ellis et al., 2015a). It is assumed that learning about organizational culture and how to integrate oneself into the organizational culture is an important aspect of socialization (Bauer et al., 2007). Studies indicate that understanding a company's internal dynamics, objectives, fundamental values, and specialized language is essential for an employee's successful workplace integration. These factors not only make immediate experiences more favorable, but they are also connected to longer-term outcomes. They affect an employee's commitment to the company, their overall job satisfaction, and likelihood to remain with or depart the organization (Chao et al., 1994).

According to Ellis and others (2015a), organizational culture knowledge is related to the content of socialization learning. Chao and others (1994) developed one of the most popular categorizations of such content by identifying six learning areas: (1) History incorporates a nuanced comprehension of an organization's origins, traditions, and customs; (2) Language emphasizes particular vocabulary or jargon that is understood broadly by organizational insiders, and understanding this language makes it easier for the group to communicate effectively; (3) Politics entails a newcomer's progressive acquaintance with the prevailing power structures and unwritten norms which dictate the appropriate behavior in a broad range of situations; (4) The People dimension denotes that newcomers frequently belong to a particular group or organizational unit, making establishing and maintaining of positive relationships one of the most important tasks in their socialization; (5) Organizational goals and values emphasize the fact that companies often expect new hires not only to understand but also internalize institutional goals and values; finally, (6) Performance proficiency is an important aspect of the socialization content, necessitating new employees acquire the skills required to perform their given tasks proficiently before or immediately after employment. Although the socialization learning content proposed by Chao and others (1994) encompasses a wide range of dimensions, its applicability for assessing the knowledge of organizational culture as a proximal socialization outcome can be considered limited. The presented dimensions may overlap other proximal socialization outcomes, notably, social integration and task mastery.

The knowledge of organizational culture, similarly to role clarity, is conceptually classified within Taormina's (1997) 'Understanding' domain. While the author acknowledges that understanding one's new work environment encompasses more than just role development, other concepts (e.g., Louis, 1990) distinguish the socialization content into two distinct aspects: role-related learning, and the cultivation of a general appreciation for organizational culture. Additionally, Louis (1990) argues that, although both new and existing members of an organization acknowledge the significance of acquiring fundamental job skills and knowledge, they frequently undervalue the importance of comprehending and adapting to the deeper aspects of the organization's culture and values. By adhering to the 'Understanding' domain learning path, it is also possible to hypothesize that the majority of the knowledge of organizational culture is rapidly acquired during the initial stages of employment, though in a less active manner. Morrison (1993), for example, did not find that the knowledge of organizational culture was associated with information-seeking activities, but rather with information-monitoring activities, such as observing what behavior is desirable or rewarded in others.

In summary, the presented proximal socialization outcomes are mostly related to the variety of content that a new employee has to learn. These outcomes, while indicative of the initial stages of a new employee's employment, are likely to vary and are contingent on a multitude of factors, for instance, the newcomer's proactive information-seeking behavior (Morrison, 1993), personal characteristics (Taormina, 1997), and the resources made available by the organization (Bauer et al., 2021). Thus, it is reasonable to hypothesize that the manifestation of proximal outcomes will vary among individuals. This kind of variance can also be found in studies. For example, in a longitudinal study conducted by Morrison (1993), there were no differences in employees' levels of organizational cultural knowledge and role clarity two weeks and six months after recruitment. On the other hand, in a longitudinal study implemented by Bauer and colleagues (2021), there was an increase in role clarity, social acceptance, and task mastery between measurements obtained after one month and nine months. The authors classified this increase into various categories based on the resources available to new employees at the start of their jobs. Also, the authors highlighted that having an immense amount of resources may result in such effective early adjustments that the subsequent improvements are less visible. It could be assumed that newcomers with high initial adjustment levels have limited opportunities for the subsequent development, or that the early resources created a solid

foundation, demanding only minimal changes in the future. Several noteworthy findings about the patterns of proximal socialization outcomes are also presented in a study by Frögéli and others (2022). By examining weekly data from newcomers from the second week after entry to the thirteenth week after entry, the researchers saw a gradual improvement in task mastery. Despite this, they also identified a negative quadratic effect that was statistically significant, suggesting that although participants made progress in their tasks, the rate of advancement slowed over time. Furthermore, throughout the study, the data showed no statistically significant shift in social acceptance. This implies that, after three months, the newcomers' initial perceptions about the group's acceptance and the level of care they received from their peers did not change. Additionally, it is noteworthy that the participants reported a reduced level of stress during periods in which they perceived a greater degree of task mastery, social acceptance, and role clarity in comparison to their own individual mean over time.

It is also possible to suggest that some proximal socialization outcomes may decrease over time. In a study by Jokisaari and Nurmi (2009), socialization variables were measured four times within 6–21 months after organizational entry. Although the work mastery remained stable over time, the role clarity gradually decreased. The authors of the study linked this decline to the perceived supervisor support. As it decreased, the employees' role clarity diminished as well.

Consistent with the observations of Major and colleagues (1995), who measured the formation of socialization outcomes within a month of starting a new job, and in accordance with the perspective of Ellis and others (2015a) that the most dynamic socialization development takes place in the initial thirty days, it can be inferred from the presented research that proximal socialization outcomes form relatively quickly. However, inconsistent results across research studies indicate that the socialization context in which these outcomes occur is more closely associated with their growth trajectory and rate of acceleration. This includes, for instance, what resources an employee brings to or receives at the beginning, such as supervisor support, or whether any other factors could be influential, such as perceived stress.

1.1.2.2. Distal socialization outcomes

Long-term changes in the newcomer's behavior and attitudes are typically viewed as distal organizational socialization outcomes. Sometimes, they are referred to as secondary ones. Ellis and others (2015a) state that the primary

goal of organizational socialization is to integrate newcomers into the organization so that they feel confident in using the skills they have, are supported by the other members of the organization, feel a sense of commitment to maximum performance, and want to stay in the organization as long as possible. Therefore, in order to conduct a comprehensive assessment of the efficacy of new employees' socialization, it is important to consider factors that become presumably more settled only after a lengthier period.

Job satisfaction

Bauer and others (2007) identified multiple job attitude variables to evaluate the long-term effects of organizational socialization. Specifically, one of the key factors associated with this set of outcomes is job satisfaction, which Locke (1976) defines as a positive affective state resulting from appreciation for one's job or work experience. It contains both cognitive and affective components. The cognitive component of job satisfaction refers to the employee's thoughts or beliefs about their current position (e.g., beliefs about the degree to which the job is challenging or provides autonomy). In contrast, the emotional component refers to the feelings the job elicits (e.g., happiness or excitement). Job satisfaction is considered to be related to newcomers' job performance (Ellis et al., 2015a), which means that the more satisfied newcomers are with their jobs, the more likely they are to not only complete their assigned tasks but also participate in activities outside of their work role.

Organizational commitment and turnover intentions

Organizational commitment is another job attitude commonly examined concerning organizational socialization. It is possible to find instances in which this factor is used interchangeably with the concept of loyalty; however, Meyer and Allen (1991) expanded it by defining all three aspects of commitment to the organization: normative, affective, and continuance. Normative commitment signifies the degree to which the employee identifies with the organization's goals and values. Emotional commitment refers to the degree to which the employee feels a part of the organization, and continuance commitment denotes the extent to which the employee is prepared to maintain a relationship with the organization. An alternative approach to organizational commitment was offered by O'Reilly and Chatman (1986), who identified three commitment dimensions: (1) compliance refers to following organizational goals mostly to get awards or avoid punishments, not because one believes in the organization personally; (2) internalization denotes a more profound commitment resulting from a perceived alignment of individual

values and organizational ideas; (3) identification, on the other hand, refers to being motivated by the desire to maintain positive relationships within the organization. It can be presumed that O'Riley and Chatman's (1986) definition of organizational commitment is, to some degree, better tailored to examining the socialization outcomes of newcomers, given that continuance commitment may overlap with another job attitude, which is turnover intentions. These two concepts are significantly related (Ellis et al., 2015a) – the less committed new employees feel to the organization, the more they intend to quit their jobs. Turnover intentions refer to employees' intention to begin planning and considering departing their current position and organization for various reasons (Mobley et al., 1979). It is a psychological predictor of turnover behavior, frequently describing the probability that an employee will soon voluntarily leave the organization.

Organizational insider status
In order to highlight the individual's self-awareness of when employees consider themselves insiders within an organization, some authors summarize the outcomes of socialization by the concept of organizational insider status (Stamper & Masterson, 2002). This factor is primarily a matter of perception; therefore, an employee may work long hours or play a central role in a department and still not feel like an insider despite their level of inclusion. It can be argued that a person feels more like an insider the longer they have worked for a company; however, the employment duration and the organizational insider's status are not necessarily linked criteria, as Stamper and Masterson (2002) point out. The findings of Dai and Chen's (2015) systematic review indicate that various elements impact employees' sense of the insider status within organizations. These elements include human resource management practices, such as delegation and participative decision-making, as well as the quality of *leader-member exchange* (LMX). The authors also state that the employees' insider status is enhanced when they perceive organizational practices as fair and tailored to their needs. It is noteworthy to mention that this phenomenon is distinct from organizational commitment, particularly in the identification dimension, as it primarily concerns an employee's perception of status and inclusion. In contrast, identification refers to the alignment of an employee's identity with the organization, resulting in a sense of unity and shared purpose.

Occupational stress
There is a growing trend toward assessing the stress experienced by new hires (e.g., Ellis et al., 2015b; Frögéli et al., 2022). Occupational stress is defined as

"harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker" (Hurrell, 2011, p. 296). As a result, it is reasonable to expect that improved socialization can help limit the frequency of such mismatches, thereby lowering the likelihood of occupational stress. Socialization experiences for new employees are closely associated with tension and burnout, making them highly relevant to their overall well-being (Ellis et al., 2015b). In order to manage this stress effectively, it is important to comprehend the specific aspects of socialization that can reduce stress, such as knowledge acquisition, learning, and social support.

Behavioral outcomes: Job performance and turnover

The two most commonly studied behavioral outcomes of organizational socialization are job performance, an indicator of how well employees do their jobs, and turnover, a measure of an employee's exit from the organization (Ellis et al., 2015a). Many factors could influence employees' job performance; however, according to Tilcsik (2014), one of the most influential reasons for the newcomers' job performance is the similarity between the resources and support they encounter when they first join and later on. In essence, the probability that an employee will do well in their role increases with the degree to which the initial work environment correlates to future conditions. As for employee turnover, this factor can sometimes be a positive for an organization, mainly if a low-performing employee who does not meet the workplace expectations is hired. The issue arises when an employee with the appropriate competencies and the potential to contribute to the organization fails to deliver good results because they feel out of place among their colleagues or do not fully comprehend their position within the organization. Inadequate socialization is highlighted as a key factor in unplanned and undesirable employee turnover (Bauer et al., 1998).

In summary, it can be argued that distal socialization outcomes may offer significant insights into the degree to which a newly hired employee is successfully integrating into their new position. When introducing the definition of organizational socialization, the latter was described as a learning and adjustment process (Chao, 2012). However, as Ashford and Nurmohamed (2012) suggest, the distal outcomes do not fully capture these processes. According to Bauer and Erdogan (2012), "they indicate the degree to which newcomer organizational socialization matters to organizational outcomes such as job attitudes and actual newcomer behavior" (p. 102). In other words, they illustrate the extent to which favorable organizational results can be

achieved through the efficient socialization of newcomers. Hence, assessing them in the context of socialization as a whole has substantial practical significance.

While the term 'distal' suggests that these outcomes should emerge later in the socialization process and, consequently, be assessed at a later point, many studies evaluate these outcomes alongside the proximal ones (e.g., Major et al., 1995; Adkins, 1995; Gruman et al., 2006; Jokisaari & Nurmi, 2009; Frögéli et al., 2022). Furthermore, Ashforth (2012) states that distal outcomes should be measured during the early stages of newcomers' socialization because they can provide valuable insight into the trajectory of the newcomers' socialization. For instance, Ashford and Nurmohamed (2012) suggest that "if one achieves role clarity, but the role is awful, job satisfaction may suffer; if one becomes integrated into the group, but the group has anti-management norms, performance may suffer" (p. 15).

Moreover, Cooper-Thomas and Anderson (2002) emphasize that the development of distal socialization outcomes could occur within a relatively brief period of time. They examined the socialization parameters of newly enlisted individuals in the British Army for two months following their admission. The authors suggested that the typical socialization evaluation intervals, such as 6 and 9 months, are too long, as their participants showed significant adjustment results after merely two months: newcomer learning predicted higher job satisfaction levels, organizational commitment, and intentions to stay. Such findings may be attributable to the particular context of the study's participants, namely, the intensive recruit training, which may vary in other fields, according to the authors.

Additionally, it is important to highlight that distal socialization outcomes may fluctuate over time. For instance, Boswell and others (2009) evaluated how new employees' job satisfaction changed at three months, six months, and twelve months after organizational entry. According to the findings, job satisfaction declined after six months and stabilized at twelve months. The authors additionally noted that this decline was more prominent among the employees who had more effective socialization, that is, those who possessed greater organizational, departmental, and job-related empirical knowledge as well as awareness of the expected role behaviors. Furthermore, this decline was also more significant among newcomers who perceived that the employer had fulfilled its commitments, such as offering valuable resources for growth and progress, ensuring consistent compensation and benefits, and showing concern for employee wellbeing; in essence, such fulfillment of commitments can be comparable to the provision of various resources at one's job. This decline was explained by the authors who

hypothesized that new employees become accustomed to and exposed to the less appealing aspects of the new position after a certain period of time has passed (when the 'honeymoon' phase is over, the 'hangover' phase begins). Notably, Jokisaari and Nurmi (2009) obtained comparable results in their longitudinal study, showing a negative correlation between the newcomers' perceived supervisor support and declining job satisfaction. Both of these studies, along with the recruits study by Cooper-Thomas and Anderson (2002), demonstrate that the manifestation and dynamics of distal socialization effects may be influenced by the context in which they occur (e.g., resources obtained).

Core insights for constructing the research framework:
- Proximal socialization outcomes can emerge early in a newcomer's job tenure, leading to the notion that the context of socialization influences the formation and speed of the development of these outcomes.
- It is reasonable to evaluate the distal socialization outcomes together with the proximal ones.
- Contextual socialization factors can also influence the time of formation of distal socialization outcomes and their dynamics.

1.1.3. Antecedents of organizational socialization

After analyzing socialization outcomes, this section of the literature review will consider the components that have the most significant impact on them. Ellis and others (2015a) distinguish between two categories of antecedents: the organizational effort and the newcomer-related characteristics and behaviors. This thesis refers to Chao's (2012) concept of organizational socialization, which implies that a newcomer's internal changes occur within the relevant socialization context. In addition, the author states that "this definition captures efforts at work adjustment on the part of the organization and the individual" (p. 582). Thus, from a theoretical standpoint, the socialization context encompasses the essence of socialization antecedents. In other words, the organizational effort and the newcomer-related characteristics and behaviors constitute what could be considered a socialization context. Subsequently, these groups of factors are examined in greater depth.

1.1.3.1. Organizational effort

Organizational effort is the formal and informal actions which the organization and its members take to influence newcomers during employee socialization. This can range from a one-time employee orientation to complex socialization procedures incorporated into human resource management processes, such as formal training or mentoring programs.

Socialization resources

In the literature reviewed previously, references to resources for facilitating newcomers' socialization were mentioned on multiple occasions (e.g., Jokisaari, 2013; Tilcsik, 2014; Bauer et al., 2021). In particular, a modern approach, more oriented towards the practical aspects of socialization, highlights resources as variables that can affect a range of outcomes for newcomers. To be more exact, the Socialization Resources Theory (Saks & Gruman, 2012) states that new employees need different resources at different stages of socialization in order to adapt successfully to a new position, team, and organization. Transitioning into a full-fledged member of the organization is a challenging and anxiety-inducing process; however, the likelihood of successful socialization increases if the newcomer has the resources to tackle the problems that arise. Therefore, this theory emphasizes that organizations and co-workers should provide the necessary resources for newcomers who, in turn, need to acquire resources to manage the transition stress effectively and better adapt to their new work roles. Saks and Gruman (2012) identified and summarized 17 socialization resources (Table 1).

Table 1. *Socialization resources (according to Saks & Gruman, 2012)*

Socialization resource	Description
Anticipatory socialization	Frequency of contact between the organization and the new hire before starting employment (e.g., greeting the new hire before the start of the job, providing the necessary information).
Formal orientation	Formal orientation programs that provide new employees with a deeper comprehension of the organization and its functioning.
Proactive encouragement	Indicates the extent to which the new employee has been encouraged to take proactive action (e.g., encouraging them to introduce themselves to others or to seek assistance).
Formal assistance	Appointment of a partner or a mentor to provide assistance and support for newcomers.
Social events	The frequency of formally organized events where the newcomer can meet and get to know other organization members.

Socialization resource	Description
Socialization agents	Support for a new employee from individuals already working at the organization, usually co-workers.
Supervisor support	Managerial behavior that exhibits concern and support for the newcomer and assists them in adjusting to the organization.
Relationship development	Opportunities for members of the organization to meet and become acquainted with one another. Typically, they are initiated by supervisors or co-workers.
Job-resources	Availability of resources (e.g., workspace, tools) needed for work.
Personal planning	Communication from the organization or manager regarding the employee's objectives, plans, and expectations.
Training	Formal programs that provide the necessary knowledge and skills for work.
Assignments	The tasks assigned to the new employee and how they relate to the job description.
Information	Providing the new employee with information from members of the organization about the job, the work role, and the organization.
Feedback	Providing timely and accurate feedback on a new employee's performance or work-related behavior.
Recognition and appreciation	Recognition and encouragement for the task performed by a new employee.
Follow-up	Collecting information on how the newcomer has adjusted following the official socialization program.
Program evaluation	Evaluation of the new employee socialization program.

The *Job Demands-Resources* model (JD-R) (Demerouti et al., 2001) functions as the conceptual foundation for socialization resources theory, emphasizing that job resources have intrinsic value and gain significance in high-demand situations. The JD-R framework broadly classifies work elements as either demands, which are burdensome and cause psychological or physical distress, or resources which are advantageous and facilitate goal achievement and well-being. Research on JD-R indicates that resources lead to positive organizational outcomes such as work engagement and commitment, while demands lead to adverse outcomes like fatigue (Bakker & Demerouti, 2007). These ideas are expanded upon in the Socialization Resources Theory, which examines the relative timing and influence of different types of resources on different socialization outcomes. According to Saks and Gruman (2012), the Socialization Resources Theory enables academics and practitioners to customize socialization resources based on the specific requirements and outcomes related to the onboarding process for particular jobs and roles. For example, the authors theorize that an increasing supervisor's support may be the most effective way to reduce the strain on new employees caused by meeting the emotional requirements of consumers.

On the other hand, new hires facing complex work processes may benefit more from constant information exchange and frequent feedback.

Certainly, incorporating these resources into a unified theoretical framework signifies a more modern approach to comprehending the antecedents of socialization. To date, the majority of research has frequently concentrated on conducting in-depth analyses of distinct factors. Therefore, two of the most commonly found resources in the socialization literature will be discussed in more detail: formal orientation programs and socialization agents.

Formal orientation programs

One of the earliest formal activities new employees may encounter is orientation. It gives fundamental information regarding the organization as well as the responsibilities of the job. Given that onboarding is an organizational effort that is designed to ease the integration of new employees into the company (Chao, 2012), orientation can essentially be considered a component of onboarding.

Historically, orientation was viewed as an important factor in helping employees adjust to a new environment. Since then, this perception has evolved to view employee socialization as a long-term process comprised of numerous interdependent and coordinated components. Nonetheless, orientation activities remain important for new employees, with studies indicating that those who participate in them are more successful than those who do not (Klein & Weaver, 2000). Notably, orientation programs that aim to make newcomers feel welcome and provide basic information (such as where to find additional information) are viewed as more effective than those that only involve filling out various documents or forms (Ellis et al., 2015a).

Socialization agents

Finally, the influence of internal members of the organization is one of the most significant factors contributing to successful socialization. In research, these individuals are commonly referred to as socialization agents because they assist the new employees in adjusting to the organization by providing them with information, feedback, role models, and support. There are different categories of socialization agents identified in the literature, including managers, co-workers, team members, colleagues from other departments, and mentors. The importance of these individuals can be viewed from multiple viewpoints. According to Ashforth (2001), organizational members help newcomers integrate by giving significance to their new identity and reinforcing the growth of that identity.

The organizational socialization research has extensively studied co-workers' contributions to new hires' integration into the workplace. Bravo and others (2003) discovered that newcomers' relationships with co-workers are positively associated with role conflict and negatively associated with role ambiguity. The authors emphasize that various co-workers may provide the new employee with disparate and incompatible information. In this situation, the ensuing ambiguity creates role conflicts for newcomers. The role ambiguity is reduced if the information received from co-workers serves to clarify the new job role. The influence of co-workers is also associated with better integration of newcomers into workgroups (Kammeyer-Mueller & Wanberg, 2003), as evidenced by co-workers' approval and participation in joint activities. Korte (2010) elaborated on the significance of establishing relationships with co-workers by demonstrating that learning about, interacting with, and gaining the respect of co-workers has a positive effect on the adjustment of newcomers.

Various research has also analyzed how mentors help new employees integrate into the workplace culture. Although it is generally accepted that mentoring contributes to successful socialization outcomes (e.g., Kram, 1983; Žukauskaitė & Bagdžiūnienė, 2012), examining how mentoring affects a new employee's adjustment in the organization is equally important. Kram (1983) identified two primary groups of mentor functions: psychosocial functions, which impact the newcomer's self-image (e.g., through role models, social support, and counseling), and career functions, which contribute to the newcomer's career development (e.g., through coaching, protection, and support in completing tasks). According to Žuskauskaitė and Bagdžiūnienė (2012), if a new employee is assigned a mentor, they receive significantly more information related to job performance, their role within the organization, accepted behaviors within the organization, and the organization itself and its operations compared to those who did not have a mentor.

The academic literature considers the new employee's supervisor to be the most significant and influential socialization agent. Successful supervisors know that the regulation of formal training and work experience increases the probability of effective socialization among newcomers (Saks & Gruman, 2012). In other words, the supervisor is in charge of most of the variables that influence how the socialization of newcomers occurs and is primarily responsible for carrying out the socialization process, including ensuring the transfer of information and the development of relationships. Frequently, the *Leader-Member Exchange* Theory (LMX) is used to describe how leadership impacts employee socialization. This theory proposes that leaders develop various forms of relationships with their subordinates, as defined by the

quality of their working relationship (Graen & Uhl-bien, 1995). High-quality relationships are characterized by mutual trust and the exchange of resources and support: subordinates are given more autonomy and responsibility in decision-making, as well as feedback, work-related information, and career development support within the organization. Social interactions and exchanges are formal and context-based in low-quality leader-member relationships. According to Kramer (2010), the manager-employee relationship can develop in two ways. It is usually considered that the relationship develops fluidly, with the supervisor and the new employee acting as strangers at first, resulting in a low-quality relationship between them. As work interactions progress, the relationship quality may improve (i.e., becoming work acquaintances), and eventually reach a high degree (i.e., building mature relationships). However, Kramer (2010) states that a high-quality leader-member relationship can sometimes be established in a very brief period and is typically the result of many personal factors, such as charisma. In their meta-analysis, Gerstner and Day (1997) discovered that a high-quality relationship is associated with an increased goal achievement, job satisfaction, organizational commitment, and role clarity. Other researchers' work, whose sample included new employees, backs up these findings. Jokisaari (2013) noticed that a high-quality leader-member relationship correlates with better job performance. The researcher hypothesizes that, when a new subordinate receives support and resources from the manager, they are willing to do more. Also, the supervisor significantly impacts the newcomer's role clarity by clarifying the position's requirements for the new employee (Zhou & Wang, 2016). Nevertheless, in the cases when the quality of the leader-member relationship is poor, this may result in a mismatch between the newcomer's role expectations formed during the pre-socialization process and, subsequently, the consequences in a decreased organizational commitment, as well as increased job dissatisfaction and turnover.

In discussing the role of supervisors in employee socialization, the concept of supervisor support is frequently introduced as a distinct construct. It refers to the extent to which employees perceive the supervisor's contribution to their well-being in the organization and the supply of the resources they require (Eisenberger et al., 2002). In this case, the supervisor's support may include information provision, social integration within the group, assignment of tasks, or emotional support.

Different approach to the organizational effort: Socialization tactics
Socialization tactics, which are among the most frequently discussed subjects in the literature on employee socialization, should also be mentioned when

addressing the antecedents of socialization. They are the means by which an organization assists new hires in transitioning to a new work role (Van Maanen & Schein, 1979). While the Socialization Resource Theory focuses on the resources needed for successful socialization, socialization tactics detail the methods and structures through which socialization is facilitated.

Most empirical research on organizational socialization relies on Van Maanen and Schein's (1979) classification of socialization tactics. The authors suggested six groups of dichotomous strategies: (1) Collective socialization tactics involve grouping all newcomers for joint training sessions, typically apart from experienced members, whereas individual ones emphasize isolated adaptation and unique experiences, giving newcomers greater control over their learning; (2) Formal socialization tactics feature structured environments such as lectures or orientation programs, whereas informal ones entail learning through real-world work experiences without explicitly defined activities; (3) Sequential socialization tactics make newcomers dependent on organizational guidance by outlining the stages and steps of the socialization process; on the other hand, random tactics do not outline a precise sequence of activities and tasks, leaving newcomers in a state of uncertainty about the outcome of socialization; (4) Fixed socialization tactics set clear time intervals for the socialization process, so that new employees know when it will start and end, while variable tactics do not inform new about this process, so that they may participate in socialization activities whenever they feel ready; (5) Serial socialization tactics entail the involvement of an experienced employee within the organization, such as a mentor or a role model who assumes the responsibility of directing the newcomer's socialization process; on the other hand, disjunctive ones do not involve these guiding figures; (6) Investiture socialization tactics are designed to maintain the individuality and distinctiveness of newcomers, by appreciating them for their personal qualities and potential contributions, while divestiture ones seek to shape newcomers in accordance with the established norms, relying on predetermined expectations of how a new employee should behave.

Jones (1986) combined these socialization tactics and classified them into two groups: institutionalized tactics (a combination of collective, formal, sequential, fixed, serial, and investiture tactics) and individualized ones (a combination of individual, informal, random, variable, disjunctive, and divestiture tactics). It should be emphasized that newcomers frequently prefer institutionalized tactics since they provide a clear structure and minimize uncertainty more quickly in the short term. In their study, Cooper-Thomas and Anderson (2002) found that institutionalized tactics were linked to improved

learning for new hires regardless of the nature of their job, the structure of their organization, or their social environment. Bauer and others (2007) found that all six tactics in the institutionalized tactics group were associated with greater role clarity; additionally, all but formal tactics were related to higher self-efficacy, and fixed, serial, and investiture tactics were associated with better social integration.

1.1.3.2. Newcomer-related characteristics and behaviors

By summarizing multiple studies, Bauer and Erdogan (2012) highlighted the significance of a proactive personality in forming new employee experiences. A proactive personality can be characterized as a consistent inclination to engage in actions aimed at achieving the desired changes and is closely linked to motivation for exerting control. Newcomers with this characteristic are more motivated to learn and actively seek opportunities to enhance their skills and relationships (Major et al., 2006). Moreover, research by Kammeyer-Mueller and Wanberg (2003) indicates that such a personality correlates with superior task performance, team integration, and a greater understanding of the organizational policies.

Another antecedent extensively studied in organizational socialization literature is the proactive behavior, which encompasses all the actions through which a new employee takes the initiative to either change the existing conditions or create new ones (Crant, 2000, as cited in Klein & Heuser, 2008). People who act in a proactive way may have a proactive personality, but acting in this way does not always mean that someone has a proactive personality. Individuals can be encouraged and trained to engage in proactive actions, regardless of their fundamental personality characteristics. Proactive behavior makes it easier to adapt during the socialization process. As a result, Ashford and Black (1996) developed a taxonomy which classifies proactive behavior into information-seeking, feedback solicitation, general socialization, social network development, relationship-building with direct supervisors, job condition negotiations, and positive framing. Most research on proactive behavior focuses on information-seeking and soliciting feedback. Information-seeking is essential for newcomers to reduce uncertainty and supplement the knowledge gained through formal activities (Miller & Jablin, 1991). As a result, they are able to learn, evaluate, and improve their performance better (Ashford & Cummings, 1983). For instance, new hires who actively sought feedback from their superiors reported higher job

satisfaction and were less likely to leave the company compared to those who did not seek such feedback (Wanberg & Kammeyer-Mueller, 2000).

The final trait of a new hire that has been linked to successful socialization in the workplace is self-efficacy. This aspect was analyzed in relation to task mastery in the previous section. However, it is important to note that self-efficacy has been examined both as a direct determinant of the preconditions for socialization and as a mediator in general, not limited to task mastery. Self-efficacy was described in research by Gruman and others (2006) as the manifestation of a newcomer's self-confidence in the successful completion of work tasks, in the fulfillment of a work role, in the functioning of a workgroup, and other areas of the organization. The authors demonstrated that self-efficacy positively predicted proactive behavior among newcomers. According to Bauer and others (1998), the task mastery, the perceived personal-organizational fit, and the increased social integration are all related to self-efficacy.

Core insights for constructing the research framework:
- Many individual and organizational aspects constitute the context in which newcomers' socialization occurs.
- In order to efficiently evaluate the socialization outcomes, a broad spectrum of socialization antecedents must be taken into account.

While the internal mechanisms for how employees socialize within an organization may remain unchanged, the socialization context in which this process occurs may shift significantly. As Saks and Gruman (2012) noted, organizational socialization has not kept up with contemporary management trends and work organization practices. This discrepancy raises questions about the introduction of new innovative methods to the socialization context and the subsequent effects they have on the newcomers' socialization. One notable method that is yet to be explored is gamification. In the following section, a thorough examination of gamification will be presented in order to enhance comprehension of its potential impact on socialization and to situate the research better.

1.2. Theoretical Assumptions of Gamification

For over a decade, gamification has been extensively discussed in both academic and non-academic literature. Despite gamification's widespread application (e.g., marketing, education, management), no single theory has been accepted to explain the phenomenon. The subsequent sections elaborate

on the concept of gamification and its relationship to the organizational context.

1.2.1. The concept of gamification

According to Deterding and others (2011), the term 'gamification' was coined by the social media industry, and its first documented use occurred in 2008. At the time, the term was used to characterize an emerging trend in which the developers of mass-market software took inspiration from video games. The rationale behind this action was, first and foremost, that video games are intended to be fun. They also possess motivational qualities encouraging players to be intensely engaged for lengthy periods. Based on these premises, it was hypothesized that gamification elements could make non-game products and services more engaging and enjoyable, thereby increasing long-term customer retention. This phenomenon has also been described as playful design, productivity games, and game layers. However, these concepts did not acquire as much traction as gamification, which at the time was defined as the use of game elements in non-game contexts (Deterding et al., 2011).

Huotari and Hamari (2012) were among the first to attempt to conceptualize gamification, defining it as the process by which conventional services are enhanced with elements that can create playful experiences in order to sustain the value created by the service for the user. The authors contend that defining gamification as the use of gamification elements alone is inaccurate because there is no conclusive set of gamification-specific elements. In addition, not every game element generates a playful experience; otherwise, dashboards for the stock market, decision support systems, and loyalty programs with built-in levels, points, and progress indicators could also be considered games. In this context, the essence of gamification should be goal-oriented, i.e., enabling the creation of playful experiences. Werbach (2014) takes a similar stance, by contending that it is impossible to determine whether a system is gamified without considering the intentions of its creators and the user's perception of it. For this reason, the author suggests that gamification should be defined as the process of redesigning activities to resemble games. Consequently, Hamari and others (2014) conceptualized gamification as a process in which the experiences induced by gamification elements (what authors referred to as motivational affordances) encourage consumers to participate in gamified activities actively, thereby leading to desired behavioral outcomes.

In terms of behavioral outcomes, research from different areas such as education, employee training, and software development shows that

gamification leads to positive behavioral outcomes, including increased engagement, social collaboration, and performance improvements (e.g., Obaid et al., 2020; Bai et al., 2020; Koivisto & Hamari, 2019). This has made gamification an increasingly popular tool for promoting behavioral changes in areas such as physical activity (e.g., Lier & Breuer, 2019) or knowledge transfer (Holzer et al., 2020). Certainly, the outcomes of gamification have been investigated in the scientific literature beyond simply behavioral aspects.

In their systematic review of the literature on gamification, Krath and others (2021) stated that gamification gained popularity predominantly due to its motivational effects. The majority of existing research supports the positive effect of gamification on motivational outcomes, even though there are studies providing contradictory results. According to Krath and others, gamification elements also contribute to various cognitive learning outcomes, including critical and creative thinking, knowledge acquisition, content comprehension, and perceptual skills. However, as Krath and others (2021) state, cognitive learning outcomes appear most effective when paired with affective and motivational outcomes.

It is important to note that, as for now, the mechanisms via which gamification produces these outcomes remain unclear and are treated more as theoretical assumptions. For example, researchers using the Self-Determination Theory (Ryan & Deci, 2000, as cited in Amir & Ralph, 2014) tried to explain the concept of gamification by suggesting four relevant factors: intrinsic motivational dynamics, extrinsic motivation, gamification mechanisms, and immersive dynamics. Intrinsic motivation depends on the feelings of autonomy, competence, and connectedness, which gamified activities can also trigger; therefore, gamification elements that allow users to make their own decisions, create challenges, and encourage social cooperation are significantly more effective. Extrinsic motivation and behavior that it produces are linked to extrinsic motivators such as badges, points, and levels. Lastly, the specific gamification mechanisms used and factors such as emotions that the gamification narrative and progress evoke can influence personal behavior. Another attempt to conceptualize gamification utilized the Goal-Setting Theory. By providing users with implicit or explicit goals to pursue, gamification elements, such as badges, align well with this theory. Hamari (2017) demonstrated that these elements can effectively motivate users to engage more actively in tasks, with performance levels comparable to those established by explicit, challenging objectives. Nacke and Deterding (2017) argue that restricting gamification to the Self-Determination Theory and the Goal-Setting Theory does not provide a more comprehensive understanding of the phenomenon's internal mechanisms, and that expanding

the field of explanatory theories would be more appropriate. However, it is essential to note that alternative explanations of the mechanism of gamification, such as the Flow Theory or the Social Comparison Theory, are rarely used in research (Huang et al., 2018).

Based on the previously mentioned definitions of gamification, it is reasonable to assume that the concept of gamification has two aspects: the purposeful application and the non-game application context. As gamification is closely linked to gamification's elements, the following section explores its content in greater depth.

1.2.2. The content of gamification

Given the definition of gamification, it can be argued that the content of gamification is determined by the gamification elements included in the process, and that the final version of the gamified activity and the outcomes that it produces should, therefore, directly depend on the characteristics, the number of gamification elements included, and their interaction. However, as stated previously, there is no accepted comprehensive list of game elements, which results in various classifications of the gamification element.

Werbach and Hunter (2012) developed one of the first classifications of the elements of gamification. It is divided into dynamics, mechanics, and components. This classification can be represented as a pyramid of hierarchical principles. The upper stratum consists of the dynamics of gamification which serve as the foundation of a gamified activity (e.g., progression, narrative, obstacles, relationships, emotions) that motivates users to take action. The middle stratum, i.e., mechanisms, are the processes that encourage further engagement in the gamified activity (e.g., challenges, cooperation, competition, resource collection, feedback, rewards). The final tier is comprised of gamification components which are specific constructs that explicitly represent the dynamics and mechanisms (e.g., badges, achievements, points, levels, leaderboards, avatars, missions, and teams). According to Werbach and Hunter (2012), it is important to consider all three factors when designing gamified systems, beginning with the highest level. Although these authors described the fundamental principles of the gamifacation design, they did not provide an exhaustive list of gamification dynamics, mechanisms, and components.

Detailed models of gamification elements have emerged as research studies have increased. However, as Schöbel and others (2020) note, describing a single gamification system is exceedingly difficult. After analyzing 104 studies, the authors provide a detailed list of gamification

elements which exist in various information systems (Table 2). However, as they note, this list is not exhaustive.

Regardless of what gamification elements are recognized in academic literature, it has already been established that they must be utilized with a purpose, i.e., to provide individuals with an engaging experience that makes them feel like they are playing the game themselves. The analysis of Nah and others (2019) focuses on this targeted application of gamification elements. The authors classify gamification elements according to their intended use, which they refer to as gamification principles. Their classification is shown in Table 3.

Table 2. *Elements of gamification and their alternative names (by Schöbel et al., 2020)*

Group of gamification elements	Examples of gamification elements
Construction elements These are the foundational elements of the gamification concept that are directly integrated into information systems	Points (experience points, loyalty points, reputation points, score, credits, currencies); Badges (trophies, medals, stamps, icons); Feedback (voiced feedback); Time pressure (deadlines, time limit, time barriers); Leaderboard (ranking, top achievement board, points board, badges board); Progress bar (progress, performance graph); Level (user level, progression); Tasks (missions, assignments, goals); Virtual goods (virtual gifts); Avatar (roles, virtual personality, user profile); Narrative (meaningful stories); Reminders (history, timeline); Collection system (badge system, points system, list of medals)
Dynamics Describes how users of a play-based system experience the structural elements	Reward (incentives, awards); Team; Team building; Cooperation; Competition; Challenge
Motivational elements These describe users' motives, emotional responses, or reactions to engage with the game systems	Social facilitation; Ownership; Achievement; Self-expression; Altruism

According to Nah and others (2019), gamification elements can be implemented based on the goals being pursued. This distinction specifies eight principles: (1) Challenge provides opportunities for growth, learning, and development by fostering problem-solving and creativity (it is important to note

that if the level of difficulty is too high, it can lead to anxiety or frustration, while if it is too low, it can result in boredom and apathy); (2) Interactivity concentrates on the system's ability to provide instantaneous feedback, thereby maintaining user engagement and fostering a state of flow; (3) Goal orientation entails establishing precise and systematic objectives that are aligned with the user's personal objectives, thereby enhancing engagement, proficiency, and performance; (4) Social Connectivity facilitates social interactions and collaborations, thereby enhancing key aspects of the flow state, such as focused concentration, time distortion, and enjoyment, and boosting intrinsic motivation; (5) Competition generates a contest in which parties seek superiority or victory, boosting motivation through intrinsic or extrinsic rewards and enabling performance comparison; (6) Achievement satisfies the psychological need to boost self-esteem by motivating users with meaningful goals that provide a sense of accomplishment, which is frequently increased by rewards or recognitions; (7) Reinforcement offers a framework of performance-based incentives, promoting the repetition of desired behaviors and enhancing teamwork; (8) Fun orientation seeks to arouse interest, wonder, and pleasure in a task or environment, resulting in enhanced intrinsic motivation, engagement. According to Nah and others (2019), specific gamification principles can be targeted in this manner to alter user motivation and engagement. Nonetheless, the classification of gamification principles according to gamification elements reveals a pattern: the same gamification element can be used to attain multiple goals. For instance, a leaderboard can be utilized to both generate challenges and increase social connectedness.

Table 3. *Principles of gamification (by Nah et al., 2019)*

Gamification principle	Design elements
Challenge	Points, Levels, Badges, Leaderboards, Quests, Feedback/Progress Bars, Performance Graphs, Prizes/Rewards/Bonuses, Rules, Marketplace
Interactivity	Points, Quest, Feedback/Progress Bars, Performance Graphs, Avatars, Roleplay
Goal orientation	Points, Levels, Badges, Leaderboards, Onboarding, Prizes/Rewards/Bonuses, Customization/Personalization
Social connectivity	Leaderboards, Social Engagement Loops, Teams, Avatars, Roleplay
Competition	Points, Levels, Badges, Leaderboards, Quest, Feedback/Progress Bars, Prizes/Rewards/Bonuses, Rules, Marketplace
Achievement	Points, Levels, Badges, Leaderboards, Feedback/Progress Bars, Performance Graphs, Prizes/Rewards/Bonuses

Gamification principle	Design elements
Reinforcement	Levels, Badges, Leaderboards, Onboarding, Feedback/Progress Bars, Prizes/Rewards/Bonuses
Fun orientation	Quest, Prizes/Rewards/Bonuses, Rules, Marketplace, 3D Space, Avatars, Storyline (Narrative Content), Roleplay, Customization/Personalization

Considering the number of existing gamification elements, the ambiguity of their classifications, and the fact that identical gamification elements can be multipurpose-serving, it can be concluded that, regardless of which gamification elements are used in a non-game environment, the most important factor to consider is how the individual in that environment will react to gamification. According to Werbach and Hunter's (2012) classification, the essential aspect of designing a gamified system is to take into consideration the experience users should feel before selecting the gamification elements. In this context, the following section will examine the experiences derived from interactions with gamification elements in greater detail.

Core insight for constructing the research framework:
- Due to the undefined and ambiguous number of gamification elements, it is reasonable to focus on those elements that are applicable either in practice or in other research studies.

1.2.3. The concept of a gameful experience

Initial research in the field of gamification significantly emphasized gamification elements. However, there has been a notable shift in recent years, with the primary focus now being on the experiences which users have when interacting with these elements (e.g., Huotari & Hamari, 2017; Högberg et al., 2019; Landers et al., 2019). One of the probable reasons for this transition was the realization that many gamification initiatives intended to induce specific behavioral changes or to implement behavioral modification interventions. It became apparent that individual variances mean that gamification features cannot be considered a universally applicable aspect. In other words, the same gamified system may evoke varying user experiences or none at all. As a result, there was a move towards personalizing gamification elements, which means that strategies were chosen to evoke a behavioral change. This has led

to a more in-depth examination of the user experiences that gamification elements can induce.

The understanding of the function and effect of gamification has resulted in more precise definitions of the idea itself. For instance, Huotari and Hamari (2017) defined gamification as a means of enhancing a service with gameful experiences in an effort to promote the user's overall value creation. This contrasts with the traditional perspectives which view users as passive actors who can be influenced through gamification elements. Dymek's (2018) work expands upon this notion by proposing that gamification provides gameful experiences that users can integrate or create by themselves. Individuals must accept and interact with the gamified system's predefined objectives and rules to manifest a gameful experience (Landers et al., 2019). However, before reviewing these experiences, it is necessary to examine how they can be generated.

Much emphasis is put on motivational factors that may account for the development of gameful experiences. In other words, a person interacts with certain gamified elements because they elicit motivational experiences; without them, the individual would not choose to engage with a gamified system. This viewpoint is articulated well in Marczewski's (2015) classification of gamification user types, which is based on the principles of the Self-Determination Theory. According to the author, users can be categorized into six categories based on their underlying motivations: (1) philanthropists are motivated by purpose, (2) socializers by social connections, (3) free spirits by autonomy, (4) achievers by competence, (5) players by extrinsic rewards, and (6) disruptors by a desire to bring about change. Each type is motivated by intrinsic factors, such as self-realization, or extrinsic factors, such as rewards, and the design elements that appeal to them vary accordingly. For instance, philanthropists value features such as knowledge sharing and gifting, whereas achievers prefer challenges and progression. According to Marczewski (2015), it is important to note that these user types are not exclusive. People frequently exhibit multiple motivations and can be influenced simultaneously by many factors, which means that they show characteristics of several user types; however, there should be at least one dominant type.

Another notion of the emergence of gameful experience is closely related to how engaged users are in gamified tasks. Leclercq and others (2020) argue that individuals engage in these activities differently, which results in varied experiences. The authors conceptualize this engagement based on two important factors. The first factor relates to how users allocate their resources, such as creativity and knowledge. For example, in an online idea contest, some

participants may strictly follow the rules to create a winning submission. In contrast, others may utilize the contest's social network to enhance their submission. The second aspect emphasizes the engagement goal for the user. In a gamified system, users might be interested in the gamification elements themselves, such as points and badges, or use these elements to reach an outside goal. For instance, some individuals may play a fitness application solely for the entertainment provided by its gamified features. In contrast, others may use the same application strategically to achieve their fitness objectives. These two factors provide a framework for comprehending the extent of user engagement and identifying precisely what keeps them interested.

However, in terms of interaction with gamification elements, the level of engagement has not been studied extensively despite its significance. The majority of studies examine other variables of interaction. For instance, Xi and Hamari (2020) measured interaction with gamification elements based on frequency and importance in their research on gamification's relationship with brand engagement and equity interfaces. Subjects were given a list of gamification elements they were required to assess based on the importance of interacting with these elements and the frequency with which they do so. When investigating the impact of gamification on brand loyalty, Mattke and Maier's (2021) research followed a similar methodology, by asking participants to rate how frequently they used gamification-related elements in mobile applications. Certainly, there are theoretical assumptions that the number of gamification elements could also be a significant factor in evaluating the interaction with gamification. Landers and others (2019) claim that the more gamified a system is, the more game-like experiences should occur; however, there is still no evidence to back up these assumptions. Taking all of this into account, the interaction with gamification elements in this study will be referred to as the active engagement of individuals with game-like features integrated into non-gaming contexts[2].

Having discussed how gameful experiences arise, it is now important to clarify how these experiences are conceptualized. This term was defined as the subjective perception of value or benefit derived by users from interacting with gamification elements within a digital service (Huotari & Hamari, 2017). Even though there were some attempts to conceptualize the content of gameful experiences (e.g., Wolf et al., 2018; Eppmann et al., 2018), the most recent

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[2] Through the thesis, the term 'interaction' will refer specifically to interaction with gamification elements, and it will not be confused with the statistical term. If 'interaction' is used as a statistical term, it will be distinctly noted.

and the most comprehensive conceptualization was proposed by Högberg and others (2019). The authors created the *GAMEFULQUEST* model and a measurement scale which goes along with it. According to Högberg and others (2019), gameful experience consists of seven dimensions: accomplishment, challenge, competition, guided, immersion, playfulness, and social experience. A list of their definitions is provided in Table 4.

Table 4. *Gameful experiences and their definitions (by Högberg et al., 2019, p. 6)*

Dimension	Definition
Accomplishment	"Experiencing the demand or drive for successful performance, goal achievement, and progress"
Challenge	"Experiencing demand for great effort in order to be successful, thus the ability of the person is tested"
Competition	"Experiencing rivalry towards one or more actors (self, other person, service, or group) to gain a scarce outcome that is desirable for all actors"
Guided	"Experiencing being guided on how (including what and when) to do and on how to improve the target behavior"
Immersion	"All attention is taken over, and the person experiences being absorbed in what he or she is doing while having a sense of being dissociated from the real world (of time, of own actions, or of space)"
Playfulness	"The experience of being involved in voluntary and pleasurable behaviors that are driven by imagination or exploration while being free from or being under spontaneously created rules"
Social experience	"The experiences emanating from the direct or indirect presence of people (both present in the real world and in the service), service-created social actors, and service as a social actor"

These dimensions were extracted from the qualitative data collected from popular gamified mobile fitness application users. Högberg and others (2019) identified seven emerging themes from user interactions with specific gamification elements of these applications. First, users experience a sense of accomplishment derived from completing tasks or attaining goals. Secondly, they encounter challenges that are not only entertaining but also motivational. These increasingly demanding tasks test the users' abilities. The third factor is competition, which makes people strive to surpass others. However, the amount of motivation depends on how competitive a person is. In addition, users of gamified systems get the impression that they are being guided in some way since the systems provide support with planning, task organization,

and performance evaluation. Another aspect describes users immersing themselves in the experience, sometimes to the point where they emotionally identify with a narrative or lose track of time. Also, Högberg and others (2019) saw the importance of playfulness, which brings pleasure and creativity to the user experience, encouraging spontaneity and discovery. For instance, playfulness can be utilized for a variety of purposes, including enjoyment, learning, and personal development (Stenros, 2014). Lastly, the social experience aspect indicates that the mere presence of other individuals, for example, through the gamified application itself or its linkage to social media platforms, can foster feelings of accountability and provide motivational support. Even though most of these dimensions were present in previous gameful experience models, Högberg and others (2019) improved on this notion by adding the guidance aspect. Including this dimension gives a more complete picture of the gameful experience. As stated in the previous section, gamification elements can be used for feedback purposes. These seven dimensions collectively enhance the user's interaction with the gamified system, thereby creating a multidimensional experience.

> **Core insight for constructing the research framework:**
> - When investigating the consequences of gamification, it is advisable to include not only the outcomes caused by the gamification elements themselves but also the gameful experiences they evoke.

1.2.4. Gamification in the work environment

After discussing the gamification principles in greater depth, the next step will be to align this concept more closely with the research context, specifically, the workplace. To date, there is a lack of uniform data on the prevalence and scope of gamification in organizational settings. An analysis of 304 organizations by Raftopoulos and others (2015) showed that gamification is mainly applied to the general market or public (37%), and to external customers, clients, or patients (33%) as a target audience. Internal human resources were involved in 19% of the cases. When the authors analyzed specific gamification application purposes, the staff education, training and recruitment, employee morale, motivation, and productivity were the areas that made up over one-third of the application cases. These findings indicate that companies select their own gamification goals and target groups.

The preceding sections stated that gamification applications must have an objective; i.e., they must aim to produce specific gameful experiences.

Consequently, if certain game-like elements are identified without intention to create gameful experience, their use should not be considered gamification. This is also emphasized by Oprescu and others (2014), who define workplace gamification as the adaptation and application of gamification principles and interactive game elements to work processes and behaviors.

It has already been established that one of the primary applications of gamification in the workplace is to increase employee motivation and productivity. Landers and Marin (2021) analyzed this aspect from the perspective of the job performance and job design. The job performance is shaped by a combination of work-related knowledge, work-related skills, and motivation (Campbell et al., 1993, as cited in Landers & Marin, 2021). Companies frequently emphasize encouraging their workers to become more motivated to improve their work quality. This is because training employees in new skills and information may be time- and money-consuming. Gamification principles could be used to make work tasks more engaging. Therefore, organizations can impact employee performance by using gamification to increase motivation. Landers and Marin (2021) also state that the job performance framework emphasizes individual-controlled behavior influencing the job performance. According to them, it is important to recognize the role of the job design as an external factor defining the work context. The job design specifies the nature and scope of the employee tasks; it also limits the tasks that employees can perform and how they carry them out. As a result, organizations must understand how the job design affects employee motivation and, in turn, performance. In this context, gamification can be used as a tool in the current job design frameworks. It involves purposefully incorporating motivating factors into the work environment to elevate the employee efficiency.

Another widespread use of gamification in the workplace is related to employee learning. In their systematic review of gamification in organizational learning, Khodabandelou and others (2023) state that gamification can improve organizational learning across the short-, medium-, and long-term perspectives. Initially, gamification is utilized to increase the immediate employee participation and engagement via a reward-based system. This aligns with the fundamental principles of organizational learning which seek to facilitate effective learning among employees and managers, thereby enhancing the consumer satisfaction. On a medium-term scale, gamification encourages good behavioral changes, improves social connections, and increases the employee satisfaction. These intermediate affordances promote a sense of accomplishment and socialization among employees. According to Khodabandelou and others (2023), the most

beneficial outcomes for organizational learning come in the long run. Gamification could increase the employees' mental engagement and enthusiasm for learning by using fun, interactive, and creative ways to solve the learning problems. This motivates employees to pursue, learn, and adapt continuously, and aligns them with the organization's long-term goals for continuous improvement. Thus, gamification emerges as an instrumental strategy in organizational learning.

However, it is important to note that these are more theoretical assumptions derived from the underlying principles of gamification. What follows is a discussion of the findings from studies of the implementation of gamification in organizational settings. Numerous studies have highlighted the positive effects of employees participating in gameful activities. Hussain and others (2018), for example, conducted an experiment to determine the effect of gamification on employee engagement, motivation, organizational commitment, and retention. Researchers split 160 volunteers into two groups and gave each group six hours over two days to complete a series of activities. One group completed the tasks in a conventional manner, while the other did so in a gamified environment which included a leaderboard, badges, evaluation tokens, contests, and achievement levels. The subjects who completed the tasks in a playful environment had higher engagement, organizational commitment, and retention levels than the control group, as demonstrated by the experiment's findings. Even though both groups showed a decline in motivation levels at the end of the experiment, the gamified group's motivation levels remained statistically higher than those of the control group. Based on these findings, the experiment's authors also hypothesized that playfulness is positively associated with the mental health of an employee, as playfulness at work leads to decreased stress levels. Similarly, Silic and others (2020) found that the introduction of a gamified human resource management system was related to employees' job satisfaction and engagement. Gerdenitsch and others (2020) also found a positive relationship between the use of applications for gamifying work tasks and work enjoyment. The primary usage of these applications was to stay organized and track their performance. Additionally, other studies have revealed similar findings, by demonstrating favorable correlations of gamification with concepts such as work engagement (Girdauskienė et al., 2022), employee motivation (Cardador et al., 2017), job performance (Basit et al., 2021) and job satisfaction (Hamza & Tóvölgyi, 2022). However, it is important to note that these identified connections are sometimes indirect or not replicable. For instance, Ramadhan and Irawanto (2023) did not discover a direct link between gamification and job performance, but employee

motivation mediated the relationship. On the other hand, Hamza and Tóvölgyi (2022) compared the job performance of two worker groups, those exposed to gamification and those not exposed to it, and found no difference.

Regarding employee learning, an experimental study conducted by Stanculescu and others (2016) revealed that gamified processes play a role in employee learning and the formation of social relationships in the workplace. During the two months of the experiment, 206 employees had to use a new and playful work system. The authors of the study sought to determine which aspects of gamification have the greatest influence on the intranet social behavior and the learning of employees. When it came to encouraging employees to join other members of their organization on their social network or to share news posts on their social network, leaderboards and badges were the most influential factors. The use of gamification increased the employees' knowledge of the organization and its specifics. Still, the authors did not specify which aspects of gamification had the greatest influence on this phenomenon. However, it is important to note that results on the links between organizational learning and gamification are mixed. For instance, Silic and Lowry (2020) discovered that those employees who participated in a gamified cybersecurity training program were more likely to demonstrate afterward the behaviors they learned. In contrast, Johnson and others (2020) found no difference in training between gamified and non-gamified training programs, with participants being equally able to apply the content taught throughout the training. Nonetheless, numerous studies indicate that gamification positively affects the learning process. The analysis of 46 studies in various learning contexts by Zainuddin and colleagues (2020) revealed that gamification positively affects learners' motivation and engagement, promotes interactions and socialization with other learners, and creates opportunities to develop independent learning skills. However, there is a lack of more detailed organizational context studies that link gamification and employee learning or development.

Despite the positive effects of gamification on work-related variables previously mentioned, Hammedi and others (2021) argue that the introduction of gamification elements should be carefully considered, as not all employees can positively embrace them. Their study found that when gamification elements are used without the goal of inducing playful experiences for employees, tasks or awards are seen as an external control tool that hinders workers' well-being by adding to their stress and making them less happy and disengaged at work. Hammedi and others (2021) also showed how important it is for workers to participate in gamified events voluntarily. In many instances, employees are required to participate in such activities. Let us suppose that

employees are given the option either to partake in gamified work or not. In that case, the negative effect of gamification on job satisfaction is reduced. In highlighting the risks of gamification in organizations, Algashami and others (2019) note that, depending on the features of gamification and how the employees receive them, gamification may be linked to reduced employee self-esteem, tension, exploitation, or the experience of negative pressure. The authors hypothesize that the likelihood of experiencing these adverse effects is the greatest when gamification is implemented at the team level, or when gamified tasks place excessive demands on employees. This could be the most visible with gamification features based on reward and feedback mechanics. For instance, a team's work quality may decrease when all the team members receive equal compensation, regardless of their individual contributions. Gamification elements, such as levels or progress bars, can potentially have negative effects on employees with high levels of autonomy, as the monitoring of their performance can be perceived as negative reinforcement. In cases when an employee has worked solely for a reward (e.g., points or a trophy), their work performance may lack initiative, creativity, and extra effort. Furthermore, gamified activities, associated with a heightened sense of competition, can result in unethical behavior, such as undermining colleagues. However, these risk factors presented by Algashami and coworkers (2019) require further empirical investigation. In addition, the use of game-like mechanics in the workplace may violate certain ethical principles, such as exploiting employees through artificial motivation or using gamification as a surveillance tool, which creates privacy concerns (Nyström, 2021). Finally, it is important to note that the novelty effect might have unintended implications for gamification (Koivisto & Hamari, 2014). Gamified activities are typically engaging because they are new. People's motivation to use gamified systems may decrease over time if they remain unchanged.

Core insight for constructing the research framework:
- A diverse range of outcomes observed in workplace applications of gamification suggests that these outcomes are dependent on various personal and environmental factors; therefore, a thorough analysis of the context in which gamification is applied is important for understanding its practical implications.

1.2.5. Gameful experience in the work environment

Since there has only recently been a shift in the perspective suggesting that it should be focused more on the experiences elicited by gamification than its

structural content, very few studies investigate the relationship between gameful experiences and the organizational context.

While investigating how organizations use gamification to engage their digital gig workforce, such as drivers and food delivery riders, Pereira and others (2022) discovered that gameful experience mediates the relationship between the task performance and the employee engagement. Simply put, the more a contract worker perceives their job as gameful, the better they perform and become more engaged. However, the concept of a gameful experience was evaluated by using general statements, thus making it difficult to determine which specific experiences led to these conclusions.

In a slightly narrower study, Schmidt and others (2023) studied 382 members of the sales staff from German financial institutions who were using a gamified sales application. They discovered that gamified competition is positively associated with the perception of an innovative workplace culture. Additionally, it was shown that the link between the competitive aspects of gamification and the perception of an innovative culture is fully mediated by the employees' perception of a gameful experience. In other words, the overall gameful experience, rather than just the competitive elements alone, influences how innovative they perceive their workplace to be. The study authors used Eppmann and others' (2018) *GAMEX* scale to measure the gameful experience; however, the latter construct was treated as a unidimensional variable. Therefore, it cannot be concluded what dimensions of gameful experience were most related to these findings.

In a work-related context, the *GAMEFULQUEST* model (Högberg et al., 2019) was used in several studies, though only in a particular area – employee training. Booysen's (2022) study included employees from a single organization who used a gamified online training platform. The findings indicated that gameful experiences positively predicted the employees' self-directed learning. Thus, employees felt a greater sense of obligation to plan, execute, and assess their learning as a result of these experiences. In addition, Kashive and Mohite's (2023) study, which also included employees who had the option to learn from e-learning modules, found that achievement and social aspects had a favorable impact on participants' views about e-learning. Furthermore, the relationship between enjoyment and perceived ease of use, as well as the perceived utility of e-learning modules, was moderated by immersion.

In the context of this study, it is important to acknowledge that, in real-world settings, employees often engage with multiple forms of gamification simultaneously. An employee can take part in a team competition in addition to participating in a company-wide leaderboard and earning badges for skill acquisition. Each of these gamified components could have a different impact on the employee's integration into the organization. Some might enhance their

sense of community, while others may inadvertently encourage a more competitive atmosphere which could be counterproductive to the goals of effective socialization. However, a practical limitation can be identified when measuring such complex interactions with gamification elements. The current tools for evaluating gameful experiences (e.g., Eppmann et al., 2018; Landers et al., 2019) are typically geared towards assessing a single gamified system. In most cases, this entails using a single specialized software program, or incorporating a single gameplay element.

Another concern is the source of gameful experience. It is believed that these experiences might arise not only from the interaction with gamification elements, but can also be amplified by external factors (Högberg et al., 2019). For instance, the feeling of accomplishment in a gamified health app might not solely result from the challenges set by the system, but also from the improvement in an individual's health (Högberg et al., 2019). As mentioned previously, an individual can also be an active agent in the emergence of these experiences (Dymek, 2018). Also, the emergence of a playful work design (Bakker et al., 2020) as a new concept shows that employees can proactively enhance their work experience, thus making it more enjoyable and challenging without changing the job's fundamental structure. This approach also implies that there is no need to introduce gamification elements to achieve these experiences. By applying a playful work design, employees may optimize their work in two different ways: either by adding fun to their job, or by establishing self-imposed competitions or challenges (Bakker et al., 2020). This strategy suggests that the outcomes of a playful work design may closely parallel the effects which are traditionally associated with the formal introduction of gamification into the workplace.

Considering all of this, and in order to better fulfill the objectives of this study, a new term is proposed – *gameful experience in the work environment*. It will be referred to as the psychological state where employees engage with their workplace in a way reminiscent of how players engage with games. This new concept addresses the complexities inherent in a setting where employees simultaneously engage with several gamified approaches. Also, it encompasses both explicit gamification elements and other implicit, contextual factors that contribute to the employees' gameful experiences.

The further development of this concept will be utilized on the *GAMEFULQUEST* model (Högberg et al., 2019), which identifies seven gameful experiences. Considering that these dimensions are designed for studies involving isolated systems, in Table 5, their conceptualization in the work environment is proposed. A similar reconstruction of the *GAMEFULQUEST* model was made by Vahlo and others (2022), who suggested that learning and playing games have a lot in common, which could

be seen by looking at why people take a massive open online course which does not have any game-like elements on purpose. As a result, they modified the *GAMEFULQUEST* model to suit a specific circumstance (in their instance, an open online course) which purposefully gamified systems. The findings of their study confirmed the notion that gamefulness does not need to be explicitly manifested in the design of the learning environment's course materials. Thus, these findings support the proposed conceptualization of gameful experience in the work environment.

Table 5. *Proposed dimensions of gameful experience in the work environment*

Dimension	Definition
Accomplishment	The experience of attaining clearly defined goals and achieving recognized standards of excellence within a professional setting
Challenge	The experience of being stimulated to push personal boundaries and abilities within a professional setting
Competition	The experience of rivalry and competitive dynamics within a professional setting
Guidance [3]	The experience of receiving directional clarity and evaluative feedback within a professional environment
Immersion	The experience of full attentional and emotional engagement within a professional setting
Playfulness	The experience of engaging in imaginative and spontaneous behavior that is self-driven within a professional setting
Social experience	The experience of interpersonal connectedness and communal belonging within a professional setting

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Core insight for constructing the research framework:
- There is a notion that gameful experiences do not rely solely on traditional game elements which are sometimes not even necessary to elicit these experiences. This becomes particularly evident when examining complex environments, such as the workplace, where various internal and external factors can overshadow the effectiveness of gamification elements in creating gameful experiences.

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[3] For better clarity and to more accurately match the definition, instead of the original term 'guided' the term in its noun form 'guidance' shall be used henceforth.

1.3. Rationale for the Current Study

After thoroughly discussing the aspects of the new employee socialization and gamification, this section will begin laying the foundation for a study which will more extensively examine the interconnections between these two factors. In separate subsections, key questions will be presented, which will be addressed by justifying the rationale behind the selected approaches to the current study. The literature analysis has shown that both organizational socialization and gamification are sufficiently complex, and sometimes not even fully defined constructs. Therefore, each subsection will impose limitations on the study's scope (wherever necessary) to prevent an excessive number of variables from undermining the clarity and validity of the research findings.

1.3.1. Assessment of employee socialization

How will newcomer socialization be approached?
As previously discussed, organizational socialization commonly refers to the process by which a person acquires the knowledge, skills, attitudes, and behavioral patterns required to adjust to a new job role (Wanberg, 2012). It, therefore, primarily revolves around the post-entry experiences of newcomers (Van Maanen & Schein, 1979). However, according to Chao (2012), this process emphasizes not only broader learning and adjustment processes that newcomers undergo when they start new job positions, but also includes the efforts of both the organization and the individual in influencing this process. In other words, organizational socialization cannot be detached from the contextual factors. Therefore, structurally, it should encompass three key components (as depicted in Figure 1):

1. A newcomer who has recently entered a new organization.
2. The internal changes experienced by the newcomer reflecting the processes of learning and adjusting to a new role. It is assumed that this process can begin before organizational entry (Feldman, 1978).
3. The socialization context which impacts the internal changes of the newcomer. This context can be used as an umbrella term to depict individual antecedents that facilitate socialization (e.g., proactive behaviors or pre-entry experience), as well as organizational ones. It is important to note that, in this research, organizational socialization is not equated to onboarding. Instead, it encompasses the entire context within which socialization occurs. This includes the organization's efforts to facilitate socialization, such as formal or

informal practices, as well as other variables that may impact this process, including the work characteristics of the current employment. This approach aligns with Chao's (2012) notion that comprehensive understanding of the context in which organizational socialization occurs is necessary to understand the experiences of newcomers.
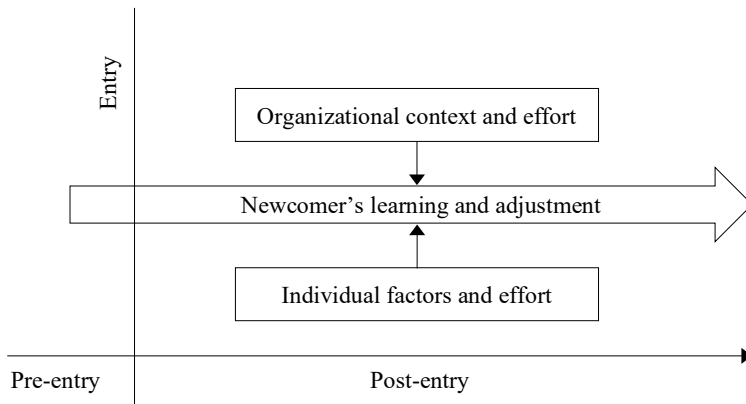

Figure 1. *Structure of organizational socialization*

Imposed limitations:

- The socialization process for new employees can begin even before they start working (Feldman, 1976), in a phase considered as anticipatory socialization. However, this study concentrates more on the insights of employees who have already joined the organization, hence excluding their pre-employment experiences (e.g., the recruitment process).

How will the trajectory of a newcomer's socialization be measured?

Another important question concerns the trajectory of a new employee's socialization and whether or not this process will be considered successful. Since there is no single way to investigate new employee socialization, each instance must take into account the nature of the research and the goals of the study (Ashforth, 2012). Contextual factors have been established to have an important impact on employee socialization. Gamification, or, in this case, the incorporation of game-like elements into the workplace, is one of the topics covered in this study. Thus, gamification can be considered one of the factors in the context of socialization, among many others. In order to assess the significance of this phenomenon to employee socialization itself, it is not reasonable to detach it from the overall context and study it in isolation.

Literature analysis has shown that the effectiveness of socialization is usually expressed through its outcomes – proximal and distal (Kammeyer-Mueller & Wanberg, 2003). The proximal outcomes (e.g., role clarity) emphasize the dynamics of internal personal changes which are linked to the previously discussed learning and adjustment process. Distal outcomes (e.g., job satisfaction) pertain to the organization's benefit, specifically, whether the newcomer has acquired the desired work attitudes and behavior during socialization. These two categories of variables can be utilized specifically to evaluate the newcomer's socialization effectiveness. This perspective is important when aiming to assess the impact of gamification on the socialization of newcomers in a comprehensive manner.

Additionally, literature analysis has revealed that there is a justification to measure both proximal and distal outcomes simultaneously. Ashforth (2012) argues that just because these outcomes are long-term does not mean that they should not be measured until the end of the socialization process. Instead, it would be better to assess these results early on in order to monitor their development over time. Moreover, Ashforth states that while job satisfaction, commitment, and performance are considered long-term objectives, it is still possible for new employees to make early impressions and start performing tasks which will likely predict their future performance. These early impressions and tasks are still considered long-term outcomes, but they can be observed from the beginning. Furthermore, there are instances where the initial levels of proximal outcomes remain the same after organizational entry (e.g., Morrison, 1993; Frögéli et al., 2022), or newcomers have high initial levels of adjustment that leave little room for further improvement (e.g., Bauer et al., 2021). The fluctuating nature of some proximal outcomes (e.g., Jokisaari & Nurmi, 2009) also complicates the measurement of these factors. All of this supports the notion that, for the current study, it is more reasonable not to capture the dynamics of socialization outcomes and relate them to gamification, but rather to capture the current levels of socialization outcomes and relate them to gamification, among other contextual factors. Therefore, while assessing the trajectory of newcomers' socialization, it is sensible to take a comprehensive approach which simultaneously measures both proximal and distal outcomes.

The unresolved question concerns the timeframe, i.e., determining a reasonable employment tenure for the purpose of this study. Literature analysis has revealed that both proximal and distal outcomes may start to emerge shortly after organizational entry. Given the study's shift away from tracking the dynamics of socialization outcomes toward their evaluation in a controlled context, it seems appropriate to maintain the traditional 12-month

job tenure period, which is considered optimal in other studies (e.g., Allen, 2006; Raišienė et al., 2019). This would also align with Liu and others' (2021) notion to consider new employees working in a new organization those who have been employed for up to 1 year.

Imposed limitations:

- The analysis of proximal and distal socialization outcomes has shown that these factors are interconnected. There might even be mediating relationships, whereby the employees' initial experiences influence their long-term attitudes about a new job. This notion is also depicted in Ellis and others' work (2015a) illustrating the links between socialization antecedents and outcomes. Nevertheless, this study does not aim to replicate the already established connections, and proximal and distal outcomes will be considered independent factors to grasp their relationship with gamification fully. Therefore, the interrelations of proximal and distal outcomes should only be taken into account if necessary for data analysis.
- Behavioral socialization outcomes, such as job performance and actual turnover intentions, should also be excluded from the study due to the limitations of the study's design. There are limited opportunities to track participants throughout their careers in new jobs, and determining what constitutes good job performance varies across different types of fields and organizations. Instead, these aspects will be explored through attitudinal counterparts, while focusing on participants' self-assessments of their readiness to perform tasks efficiently and their intentions to leave their jobs.

What contextual factors of newcomer's socialization will be measured?

As mentioned above, *contextual factors* or the *socialization context* will refer to the antecedents impacting a newcomer's socialization. Regardless of the fact that they have already been discussed in previous sections, it is still important at this point to clarify which theoretical aspects are relevant in constructing research. From the organizational side, the socialization tactics (Van Maanen & Schein, 1979) or specific integration programs implemented by the organization (Klein & Weaver, 2000) significantly influence new employees' experiences, as well as other members of the organization. Considering that these aspects construct the setting in which new employees' socialization occurs, a more structured and controllable approach would be to employ the Socialization Resources Theory (Saks & Gruman, 2012), which

covers the content of the latter factors and reveals the new employees' perceived experience of the organizational efforts.

According to the Socialization Resources Theory, two distinct categories of resources – social capital and work-related resources – are important for newcomers in their first six months of employment (Saks & Gruman, 2012). Social capital resources include social events, socialization agents, supervisor support, and relationship development. For instance, social events provide networking opportunities, whereas socialization agents and supervisors provide emotional and logistical support and career-advancing resources such as challenging assignments and growth opportunities. On the other hand, work-related resources emphasize job performance. These include job resources, personal planning, training, assignments, information, feedback, and recognition and appreciation. Assignments and feedback stand out as particularly important work-related resources because they correlate with the fundamental job characteristics such as autonomy and task significance, which have been demonstrated to be strong predictors of work engagement (Bakker & Demerouti, 2007). Personal planning and training foster intrinsic motivation by encouraging personal growth and skill development, while recognition and appreciation serve as extrinsic motivators by rewarding excellent performance. To summarize, the Socialization Resources Theory suggests that a balanced mix of the social capital and work-related resources is essential for the effective socialization of newcomers.

It is important to note that much of the literature on socialization agents emphasizes the significance of the supervisor. Supervisor support is linked to positive socialization outcomes, as indicated in a number of studies (Eisenberger et al., 2002; Jokisaari & Nurmi, 2009), and it can be considered a part of the social capital resources. Additionally, past research has underscored the importance of LMX in employee socialization (e.g., Gerstner & Day, 1997; Jokisaari, 2013; Zhou & Wang, 2016). However, LMX, which examines how relationships between employees and supervisors vary in quality, thus also leading to differing levels of trust, respect, and mutual obligation, conceptually differs from supervisor support. The latter focuses more on the guidance and resources a supervisor provides to their team collectively. Therefore, LMX should be recognized as an additional, distinct parameter in understanding organizational efforts in employee socialization.

Other factors that are outside the scope of socialization resources but can still influence the socialization of new employees may include characteristics related to the job, workgroup, or sociodemographic aspects. For instance, newcomers may find it more challenging to socialize in a large workgroup, as its members might feel less connected to each other or participate less

frequently in group activities (Forsyth, 2019). Additionally, remote work can alter the way new employees identify with their jobs compared to those working on-site (Bailey et al., 2017), thus posing challenges for the organization in workforce management. Adkins (1995) cautiously suggests that previous work experience can also influence employee socialization. Generally, this can help newcomers integrate more efficiently; however, it can sometimes be a hindrance, mainly when experienced employees display overconfidence and pay insufficient attention to training.

In summary, all of these determinants constitute the socialization context, and therefore, in this thesis, it will be defined as a set of factors related to employee socialization. It is reasonable to conclude that, for the scope of this research, the socialization context should include social capital and work-related resources, LMX, and key job-related or sociodemographic characteristics. This method would achieve the optimal variant for evaluating the antecedents of employee socialization while also obtaining essential information without the overload of variables. These contextual aspects of socialization will be referred to as *individual* and *organizational variables*.

Imposed limitations:

- From a practical standpoint for organizations, focusing on the individual behavior and personal characteristics of new employees is less relevant in this context, as the study primarily concentrates on the application of gamification. This approach stems from the understanding that gamification strategies are generally designed and implemented at an organizational level (Raftopoulos et al., 2015). Therefore, the emphasis should be placed on those aspects that the organization can alter within its work environment. Hence, the main focus of this study will be on organizational efforts as antecedents for socialization outcomes. Concerning personal characteristics, an exception will be made only for sociodemographic variables, as these can help in understanding if and how responses to gamification strategies vary among different demographic groups within the organization, thereby enabling more nuanced analysis and application of these strategies.

The initial components of the research model can be formulated through the synthesis of the information contained in this subsection. The outcomes of socialization, both proximal and distal, are the principal determinants used to evaluate the employee socialization. Taking into account the theoretical principles, the assessment of these consequences should be inseparable from

the context of socialization itself. Thus, the initial research model posits that individual and organizational variables influence the outcomes of socialization (Figure 2a).

Figure 2a. *Initial fragment of a research model (only includes aspects of individual and organizational variables, and socialization outcomes)*

1.3.2. Gamification and employee socialization

How does gamification relate to employee socialization?
So far, the relationship between gamification and organizational socialization has not been comprehensively studied. The onboarding or orientation process is the primary focal point of the majority of the research that has been done before. As mentioned previously, these processes generally indicate an organization's efforts to integrate a person into a new work role; nonetheless, it is just one component of the more extensive socializing process.

Considering that the onboarding process is largely focused on employee training – such as for new roles or task execution – it is theoretically plausible to argue that gamification could be an effective tool for creating short-term or long-term adaptation programs. Several studies offer partial support for this notion. In Heimburger and others' (2020) study, 89 participants used a gamified mobile onboarding application with several features. For instance, *Team Bingo*, which matches new employees randomly with their coworkers, allowing them to arrange a coffee chat or after-work meeting; or *QR-Hunting*, which is a timed challenge where new employees search for and scan specific QR codes placed around the company to gain detailed information on various topics. According to the results, the gamified onboarding application was generally preferred to its non-gamified counterpart because it was more pleasurable, and it facilitated social interactions between coworkers. Additional analysis revealed that personality characteristics, such as

agreeableness and openness, were associated with a preference for gamified applications.

Another study by Bell and others (2020) investigated newcomers' perceptions of using a gamified onboarding application. The results showed that most participants found that the application increased their engagement and motivation compared to the previous onboarding experiences. Levels and quiz-style games were the top features contributing to participant motivation and engagement. Similar participant feedback was also presented in a quasi-experiment conducted by Brull and others (2017), where the effectiveness of a gamified orientation program for newly hired nurses was evaluated. Gamification elements such as avatars, objectives, points, and challenges were incorporated into the program. The training for other orientation groups was conducted by using traditional methods or through an online learning platform. Participants in the gamified orientation group reported that the program was more engaging, interactive, and stimulating, and they also demonstrated greater scores on postintervention questionnaires compared to other groups in the study. Brull and others (2017) concluded that gamification could be associated with improved information retrieval among newcomers following the learning process.

While some studies did find favorable outcomes, others did not. In their study, Burns (2019) aimed to evaluate whether a digital scavenger hunt could enhance the effectiveness of face-to-face orientation by reinforcing information, introducing new concepts, encouraging social connections, reducing stress, and boosting employee competence. No notable difference was observed in the autonomy, competence, and relatedness levels between the control and the test groups, and both groups also showed similar retention of essential institutional information. Similarly, Jedel and Palmquist (2021) developed a gamified mobile application which aimed to assist newcomers during their onboarding process. The results showed that the use of this tool was low, and the participants did not perceive it as useful. Another issue that arose was a lack of perceived gamefulness. The authors concluded that the application was not producing experiences typically found in games, while suggesting that future designs should prioritize user experience.

Despite the mixed findings, it is important to acknowledge that they are limited regarding employee socialization, as they primarily concentrate on finite processes, such as orientation and onboarding. No research studies were found that provide a more comprehensive analysis of the connection between gamification and the socialization of newly hired employees. For example, there is a lack of direct investigation into how gamification affects most proximal socialization outcomes. Girdauskienė and others (2021) observed

that gamification had a minimal impact on role clarity compared to other factors influencing employee engagement. Yet, the actual effect size of this effect remains unexplored. Additionally, while the literature review suggests that gamification is linked to distal organizational socialization outcomes, such as job satisfaction (e.g., Silic et al., 2020), organizational commitment, and turnover intentions (e.g., Hussain et al., 2018), these studies often rely solely on employees' opinions and expert interviews, or they are experimental studies that do not consider the whole work context. Additionally, it is important to note that none of them include actual newcomers as participants.

Building on the ideas presented by Jedel and Palmquist (2021) which suggest that the incorporation of gamification into the onboarding process should be more carefully planned because gamification elements alone may not necessarily produce the desired outcomes, this can be linked to points made in earlier sections by stating that these elements are merely tools for the creation of gameful experiences. Consequently, when considering the broader process of employee socialization, how new employees feel in a work environment that includes gamified aspects should also be taken into account.

In summary, it can be stated that the connection between gamification and organizational socialization is still to be identified. Previous studies on gamification in the workplace examined the direct influence of its elements. However, the current focus is more on the experiences that gamification generates (Huotari & Hamari, 2017). Therefore, it is pertinent in this study to examine the impact of gamification in a twofold manner – both through the interactions with gamification elements, and the gameful experiences they create.

Imposed limitations:

- Due to the undefined number of gamification elements and the variation in their application strategies (Huotari & Hamari, 2012), this study will focus on a select few. The criteria for choosing these elements will be based on their popularity and practical application within organizations, their recognizability, and their prevalence in scientific research. This approach ensures a manageable scope for analysis while covering the most impactful and widely used elements in the field of gamification.

Should gamification be considered a socialization resource?

Expanding on the socialization resources approach, gamification elements can theoretically be related to socialization resources. They help ensure the precision and clarity of the assigned tasks, provide immediate feedback for

accomplishments or actions taken, and offer support from a dedicated social community (Koivisto & Hamari, 2019), and all of these points are important for newcomers. It leads to a possible inference that gamification could be a strategy to improve newcomers' socialization. However, previous analyses of gamification effects in the workplace have yielded ambiguous results. This leads to assumptions that some of the aspects of gamification might contribute to heightened work demands. For example, gamification elements may escalate competitiveness within teams (Algashami et al., 2019), and competitiveness has negative consequences on team dynamics (e.g., Rink et al., 2013).

In this context, it could be assumed that gamification elements should not be directly considered a socialization resource because of their potential adverse effects. Also, even the ideas previously expressed about how it facilitates aspects of work organization (Koivisto & Hamari, 2019) point to the fact that they act as a way for the transfer of resources instead of being resources themselves. According to Saks and Gruman (2012), clearly defined work tasks, feedback, and social support are in themselves resources. Thus, gamification elements should be studied separately.

By condensing the findings presented in this subsection, it is possible to continue the development of the research model. Because the effectiveness of newcomer socialization is determined by its outcomes, it is important to understand how gamification affects them. The two gamification-related topics covered in this section are gameful experiences and gamification elements. Since gamification elements are directly incorporated into the work environment, they can be considered additional factors in the context of socialization. Despite the fact that they inherently fall under the category of organizational variables, these elements will be classified separately for the sake of convenience, given the major focus of this work. Thus, it is important to assess the potential effects of gamification elements on the socialization outcomes. Another aspect is the gameful experience within the work environment. It results from an individual's perception of their surroundings and is thus presented separately from the socialization context. Gamification elements may have an impact on gameful experiences, which may then have an impact on the socialization outcomes. These assumptions are conveyed in another fragment of the research model (Figure 2b).
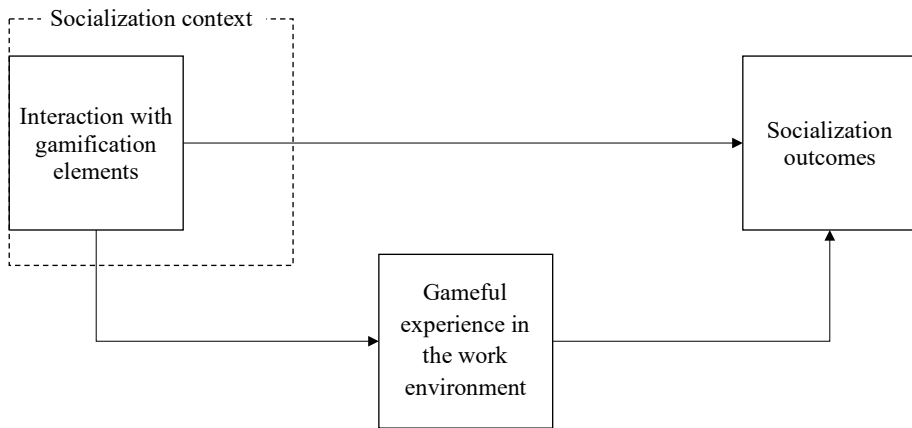
Figure 2b. *Initial fragment of a research model (only includes gamification-related factors and socialization outcomes)*

1.3.3. Other determinants of gameful experience in the work environment

What other factors may influence the gameful experience in the work environment?

As previously mentioned, gameful experiences arise from individual interactions with game elements (Huotari & Hamari, 2017; Högberg et al., 2019). These experiences are perceived as a multidimensional construct, suggesting that gamification can lead to diverse psychological outcomes, such as playfulness or a competitive desire. Therefore, it is reasonable to believe that, in this study, interaction with gamification elements will be a direct determinant of gameful experiences.

However, unlike in other studies, the concept of gameful experience in the work environment here is understood as arising not only from a single gamification source, but also as being explicitly or implicitly influenced by other individual or environmental factors. For instance, Koivisto and Hamari (2014) found that age is not significant in the gameful experience, but gender does introduce certain differences. They noted that women perceive greater social benefits from gamification than men, especially in terms of recognition, reciprocity, and the network size. On the other hand, men prefer gamification elements related to social competition (Tondello et al., 2017). There are even theoretical similarities that can be drawn between socialization resources, LMX, and the gameful experience. Feedback, usually considered a work-related resource (Saks & Gruman, 2012), shares features with the instant

feedback mechanisms in gamification (Nah et al., 2019) which are likely essential for fostering a sense of guidance. Social capital resources, such as relationship building, are also enhanced by gamification (Stanculescu et al., 2016), contributing to a sense of interpersonal connectedness and community belonging. While gamification may also induce competitive feelings, some researchers propose that LMX could similarly incite competitiveness (Vidyarthi et al., 2010). Given the limited availability of organizational resources and growth opportunities, competition within a group for these resources seems probable, thereby emphasizing the importance of one's relative standing in LMX within the workgroup. This situation may lead employees to compete with one another to gain a larger share of their leader's favor.

Figure 2c. *Initial fragment of a research model (only includes aspects of individual and organizational variables, and gameful experience in the work environment)*

Considering all of this, it is presumed that this study would benefit by not only including interactions with gamification, but also by examining individual and organizational variables as determinants of the gameful experience (Figure 2c). Although the aforementioned aspects are only theoretical assumptions, it is important to clarify how the gameful experience develops in the context of employee socialization.

1.3.4. Aims of the study

This section presents the aim, objectives, and final theoretical model of the study (Figure 3), which indicates potential interrelationships among variable groups. This research examines organizational socialization in its entirety, surpassing the scope of simple onboarding experiences. It is argued that the results of this process are substantially impacted by the context in which

socialization occurs. The study raises questions about what happens when gamification is implemented in this particular context. Therefore, the focus of this study will be on the types of gamification practices which new employees generally encounter in their new jobs rather than on gamified onboarding activities alone.

Aim of the study: to examine the relationship between newcomers' socialization context and socialization outcomes through the perspective of gamification.

Objectives of the study:
1. To evaluate the patterns of newcomers' interaction with gamification elements in the workplace.
2. To assess the relationships of newcomers' gameful experience in the work environment with both individual and organizational variables, and the interaction with gamification elements.
3. To assess the relationships of newcomers' socialization outcomes with both individual and organizational variables, and gamification-related variables.
4. To integrate the established relationships between the socialization context, gameful experience in the work environment, and socialization outcomes into a single model.
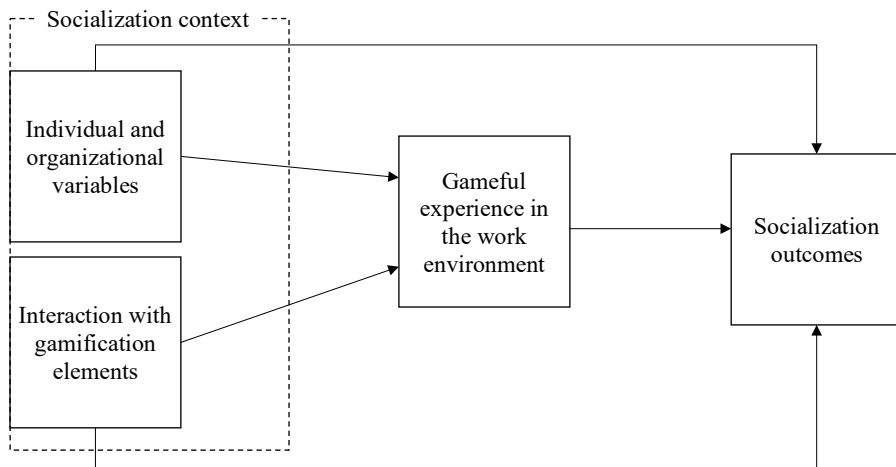

Figure 3. *Final theoretical model of the study*

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2. METHOD

2.1. Study Design

Several aspects were taken into account when constructing the design of this study. These include the rationale for the chosen type of research design and the methods employed for collecting gamification data.

The study's aim and objectives were addressed through the adoption of a cross-sectional research design, which analyzes data from a population at a specific point in time (Setia, 2023). A self-report questionnaire was used to collect data about employees' work experiences and perceptions. As Spector (2019) notes, this design is particularly suitable for research where the relationships and interactions between variables, such as causes and effects, are not yet clearly established, and where the long-term interaction of these variables remains unpredictable. Therefore, these aspects are in line with the primary focus of this research, which is to investigate the largely unexplored connection between gamification and socialization. While there are certain limitations associated with cross-sectional design, such as common method variation or the inability to infer causality (Setia, 2023), these were not critical concerns for this study as the primary rationale for it was to observe the organic relationship between socialization and gamification in contexts free from external interventions. In addition, the complexity of employee socialization and the ambiguity surrounding its causal relationship with gamification make it challenging to pinpoint precisely when socialization outcomes occur and can be assessed. Therefore, a longitudinal design, which requires setting specific start and end dates for these processes, is not suitable. Also, the gamification elements studied in this research either naturally existed or were absent in the participants' workplaces. This organic setting allowed for effective control of variables influencing employees' socialization, thus enabling a reliable evaluation of its relationship with gamification. Consequently, it was concluded that a cross-sectional design is best suited to the study's objectives.

Utilizing self-report questionnaires raises further questions about the accuracy of the information. Since the decision was made to include in the study sample employees who have been working in the current organization for up to 1 year, a question emerges whether participants at the end of this interval will be able to recall their experiences after organizational entry accurately. Allen (2006), in his cross-sectional study utilizing a 1-year period, emphasized that this time frame is optimal to enable respondents to recall their socialization experiences. Therefore, it is reasonable to assume that recall bias

will have little impact in this study. This is also supported by the fact that the majority of questions in the study questionnaire are in the present tense (i.e., what the employee thinks or feels now), and all questions related to assessing the past require recalling not subjective experiences but factual information, i.e., what was provided to the new employees at the beginning of their job.

Finally, the last aspect of the study design involves evaluating how new employees experience interactions with gamification elements. Ziesemer and others (2013) have shown that users engaging with gamified systems often cannot later identify which gamification elements constructed the system. There is also a variance in their perception of what is considered gamification. However, research designs providing specific instructions on which elements need to be evaluated (e.g., Mattke & Maier, 2021; Xi & Hamari, 2020) appear to increase accuracy. Since this study aims to assess the natural relationship between gamification and employee socialization, it will be structured to provide employees with identification cues, described in further detail later, on what could be considered a gamification element. These instructions could potentially enhance the reliability of such self-assessments, allowing employees to evaluate aspects of their personal encounters with these gamification elements more accurately.

2.2. Study Procedure

The research participants were recruited online through the *Prolific* (https://www.prolific.com) platform. Prolific is a web-based platform which facilitates the recruitment of participants for scientific and non-scientific studies. Researchers can use the platform to find volunteers who are willing to participate in studies for a predetermined fee. Compared to similar services, Prolific participants demonstrated better performance in attention checks, comprehension, recall, and authenticity (Douglas et al., 2023), which is why this platform was chosen for the current research study.

120,260 active Prolific users had connected to the platform in the previous 30 days at the time of the study. Each user has submitted sociodemographic and other details about themselves into the system, thus allowing research participants to be strategically chosen. Initial prescreening was performed by using the system's filters to guarantee that the study questionnaire reached only those individuals who demonstrated the characteristics sought. Given that the survey for this study was conducted in English, the first screening used within the system was to target only participants from the United Kingdom and the United States of America. The goal was to engage with native English-speaking participants so that the

survey's language would not impede comprehension or completion. As a result, an extra filter was used to further reduce the intended participants to those whose first language was English. In addition, a filter was applied to only include participants who work for companies with an employee pool of 250 or more. Large organizations can potentially offer a diverse and formalized context ideal for studying socialization and gamification. Their resources and structure frequently allow the implementation of game-based strategies and varied socialization methods, while offering an in-depth understanding of the impacts of these processes on individual and group behaviors. The last criterion considered was the duration of an individual's employment in their current organization, with a maximum limit of 12 months. When all of the criteria mentioned earlier were taken into account, the final candidate database had 2,010 users. The system chose 641 people from this list at random to receive the questionnaire. However, 28 participants did not finish the questionnaire, resulting in a final sample size of 613 completed responses. Only those who completed the questionnaire were compensated.

Before starting the questionnaire, the participants received an informed consent form. This document details the study's objectives, procedures, participation and withdrawal conditions, data management and usage purposes, and other relevant information. The participants were given the questionnaire exclusively upon their acknowledgment of having read and comprehended the provided information as well as their agreement to partake in the study.

The questionnaire requested that participants specify their current workplace employment history to guarantee that only employees with up to one year of experience were included in the sample. This served as a double-check to avoid cases where the information provided by users in the Prolific system was outdated or inaccurate. When the participants indicated they had worked in the organization for over 12 months, their data were eliminated from further research proceedings. The research questionnaire included three control questions following best practices for selecting participants for online research (Oppenheimer et al., 2009). Randomly inserted questions in the questionnaire were designed with clear instructions on what the participant needed to mark in that question. This was done to prevent inattentive form completion. If participants failed at least one of the three control questions, their data was deleted from further analysis. When all participant responses were collected, they were checked for bias – the propensity to select the same response option across all questions – and other irregularities. After executing all control checks and excluding individuals who had worked for more than

12 months, failed control questions, or filled out the questionnaire biasedly, 575 participants' replies were examined further.

2.3. Study Sample

The sample consisted of 282 males (49%) and 293 females (51%), with an average age of 32.87 years (SD = 10.20). A large proportion of the respondents, 83%, resided in the United Kingdom. Approximately 63% of those surveyed had earned a Bachelor's degree or higher. The primary occupational fields represented among the participants were IT (15%), customer service (13%), and education (11.5%). Notably, most participants (95.8%) had prior work experience, indicating that their current workplace was not their first. Nearly half (47.5%) of respondents claimed to have more than ten years of work experience. Participants had spent 6.92 months (SD = 3.21) in their current workplaces. Additionally, 28.9% of the participants reported having subordinates in their roles. A more detailed breakdown of the key demographic and work-related characteristics of the study participants is available in Appendix 1.

2.4. Measures

All the measures utilized in the study were presented to the participants in English. The authors of the pre-existing instruments granted permission for their use. In the upcoming sections, as these measures are introduced, examples to illustrate their content will be provided. The content of any additional instruments specifically designed for this study is detailed in Appendix 2.

2.4.1. Individual and organizational characteristics

Sociodemografic characteristics. In the questionnaire, the participants were asked to specify their gender, age, and the highest level of education attained. The respondents were also required to indicate their overall work experience. For further analysis, the participants were divided into two educational categories: those with an academic degree (N = 391) and those without one (N = 184). Similarly, the participants were categorized into two groups based on their total work experience: those with more than ten years (N = 273) and those with less (N = 302). These categories were distinguished based on the results of the preliminary data analysis.

Characteristics of current employment. The participants were asked to state whether their current job is the first in their career and whether they have any other work commitments besides this job. Additionally, they were asked how closely the job aligns with their field of expertise, what portion of a full-time schedule they work in this job, whether they have any subordinates in their current position, and what the balance is between in-person and remote work.

In order to determine the size of the workgroup that the respondents are part of, they were asked to identify the size of it by selecting a number from a range of 2 to 30 (including themselves). After preliminary data analysis, it was apparent that a significant number of participants selected the latter option, which made it difficult to analyze the workgroup size as a continuous variable. Despite the lack of a universally accepted classification for a workgroup size in the literature, this study's categorization of this variable drew upon research from various fields. Studies such as Tunçgenç and others (2021) typically classify workgroups as small (2–5 employees), medium (6–10 employees), or large (more than 10 employees). Accordingly, the data in this study were segmented into the following categories: individual workers (N = 24), small groups (N = 201), medium groups (N = 202), and large groups (N = 148).

In all subsequent data analyses, the job tenure will be regarded as a continuous variable, denoting the length of time (with a range of one to twelve months) an organization hired a new employee. In order to ascertain the accuracy of the findings, potential disparities among job tenure categories with regard to gamification-related variables and socialization outcomes will be analyzed additionally. Any intergroup differences discovered will be taken into account when interpreting the results. For the purposes of this study, the participants were categorized based on their tenure into the following groups: 1–3 months (N = 109), 4–6 months (N = 139), 7–9 months (N = 189), and 10–12 months (N = 138).

Relationship with the manager. The *Leader-Member Exchange* (LMX) theory, which posits that managers develop qualitatively distinct and unique relationships with each subordinate, was employed to assess the relationships between new employees and their managers. For this purpose, the LMX-7 scale (Graen & Uhl-Blen, 1995), which consists of 7 items, was utilized. Respondents were asked to evaluate the items on a 5-point scale, where '1' represents the lowest and '5' represents the highest aspect measured by the item. An example item is, "I have enough confidence in my leader that I would defend and justify his or her decision if he or she were not present to do so." A higher aggregate score on the scale indicates a higher quality of relationship

between the manager and the subordinate. The internal consistency of the items was good, with a Cronbach's α of .864. Confirmatory factor analysis with one residual covariance adequately validated the scale's structure: $\chi^2 = 66.356$, df = 13, p = <.001; RMSEA = .089, CFI = .977, TLI = .960, SRMR = .028.

Socialization resources. The Socialization Resource Theory was used to understand how the socialization process occurred among the respondents (Saks & Gruman, 2012). Although this theory identifies 17 key resources available to newcomers – ranging from the period before they start working for the organization to the evaluation of formal onboarding programs – this study will focus solely on two major categories of resources: *work-related* and *social capital resources*. Work-related resources refer to all necessary means, such as physical resources and tools, that are readily available to newcomers and are essential for performing their tasks. Social capital resources include social events, supervisor support, interactions with socialization agents, and relationship development. During the implementation of the study, no existing instrument was found to measure these aspects. Therefore, a new instrument was specifically developed for this research, incorporating key elements of the Socialization Resource Theory. Four items were constructed to measure social capital resources, and seven items were devised to measure work-related resources. All of these items had to be evaluated on a 5-point scale (where 1 indicated 'Strongly Disagree', and 5 stood for 'Strongly Agree'). Typical questions for each scale are: For social capital resources, "At the beginning of my work, I always received help from my new colleagues."; and, for work-related resources, "I was given all the tools I needed to do my job." A full list of items is presented in Appendix 2. The higher scale scores indicated that the respondents received more socialization resources from the organization in their new jobs. Both scales showed good internal consistency (Cronbach's α ranged from .726 to .886), and confirmatory factor analysis with two additional covariances validated this instrument's two-factor structure ($\chi^2 = 174.413$, df = 42, p <.001; RMSEA = .076, CFI = .958, TLI = .942, SRMR = .037).

2.4.2. Gamification-related factors

Interaction with gamification elements. The participants were initially provided with descriptions of eight specific gamification elements. After reviewing these descriptions, they were asked to indicate whether or not they had encountered any of these elements in their work environment. Table 6

provides a list of the gamification elements used in the study, along with their respective descriptions.

Table 6. *Gamification elements and their descriptions*

Gamification elements	Description
Points, point systems[1]	Real or virtual points are awarded for completed tasks or implemented activities, which can later be used in a certain way, for example, to purchase goods or services
Leaderboards[2]	Team or group members are publicly ranked on a real or virtual leaderboard based on work performance results or other achievements
Badges, trophies[3]	A real or virtual representation, such as a badge, a medal, a trophy, etc., is awarded for achieving a goal or delivering a result
Levels, level systems[4]	The leveling system is designed to recognize achievement by allowing employees to move up to higher levels or stages for successful work activity. This system also helps employees evaluate their progress and identify the gap between their current level and the highest level
Progress tracking, progress bars[5]	A visual representation of the progress of tasks completed, such as the ratio of completed to incomplete tasks
Chat channels, clans, guilds[6]	Groups of people within an organization who come together based on similar goals, interests, or hobbies that are not work-related; groups can be either closed or open
Challenges[7]	Complex tasks, based on testing one's skills and abilities; rewards are typically given for successfully completing a challenge
Competitions, contests[8]	Individual or team activity aimed at performing better than other individuals or teams

Note. These gamification elements will be referred to as [1]*Points*, [2]*Leaderboards*, [3]*Badges*, [4]*Levels*, [5]*Progress bars*, [6]*Guilds*, [7]*Challenges*, and [8]*Contests* in the subsequent analysis of the results

The choice of these eight gamification elements was based on their prevalence in workplace settings as well as their inclusion in similar research studies, where participants were asked to subjectively evaluate gamification elements (e.g., Mattke & Maier, 2021). Also, descriptions of these elements were developed based on their most prevalent depictions in the literature. If participants indicated that they had encountered a particular gamification element in their workplace, they were then asked to rate on a 6-point scale the frequency with which they encountered this element (where 1 indicated 'Very

rarely', and 6 denoted 'Very often') along with their level of active engagement in activities related to this gamification element (where 1 indicated 'Not engaged at all', and 6 meant 'Highly engaged'). This evaluation had to be carried out for each element that the participants noted they had encountered in their workplace. These measurements will be referred to as *the average frequency score* and *the average engagement score*.

Gameful experience in the work environment. To evaluate the gameful experiences that new employees come across in the workplace, the *GAMEFULQUEST* model was implemented (Högberg et al., 2019). Initially, the *GAMEFULQUEST* model and its accompanying questionnaire were intended to assess user experiences when interacting with a singular gamified system, such as a mobile app. To provide a broader perspective for this study, a questionnaire based on the *GAMEFULQUEST* model was developed to evaluate the overall employees' gameful experiences in the workplace. This modification took into account the premise that the work environment is extremely complex and that gameful experiences can originate not only from a single gamified system, but also from multiple gamification sources or even factors unrelated to gamification. Based on the model, seven dimensions were distinguished: playfulness, social experience, guidance, immersion, challenge, competition, and accomplishment (the definitions of these dimensions are provided in Table 5). For each of them, the participants were asked to rate three items on a 5-point scale (with 1 meaning 'Strongly Disagree' and 5 meaning 'Strongly Agree'). All statements began with the phrase "My work environment..." (for instance, for the Playfulness dimension: "My work environment allows me to be playful," or, for the accomplishment dimension: "My work environment encourages me to strive for the best results"). Appendix 2 lists all the items used in this research study. In constructing the items, reliance was placed on the proposed definitions of gameful experience dimensions (Table 5) and on the principle that they could be generally applicable to the work environment and not limited by isolated systems or methods. The sum of the scores for each dimension's items was used to determine the level of each dimension. The higher is the score, the more prominent is the manifestation of a particular gameful experience. Following a psychometric evaluation of the developed scale, it was found that the internal consistency of all seven dimensions was sufficient, with Cronbach's α values ranging between .730 and .860. A confirmatory factor analysis validated the structure of the scale: $\chi^2 = 505.139$, df = 168, p <.001; RMSEA = .059, CFI = .952, TLI = .940, and SRMR = .059.

2.4.3. Socialization outcomes

Role clarity. The assessment of role clarity was conducted by utilizing a six-item scale developed by Morrison (1993), which indicates the extent to which employees show a clear comprehension of their occupational roles. The participants were asked to rate the given items on a five-point Likert scale, with 1 representing 'Strongly disagree' and 5 standing for 'Strongly agree'. "I know what my responsibilities are" is an example item from the scale. The total score of all items was used in the subsequent analyses, showing that a higher score corresponds to a greater role clarity. The scale showed good internal consistency (Cronbach's $\alpha = .867$), and a confirmatory factor analysis validated its unidimensional structure: $\chi^2 = 33.990$, df $= 9$, $p < .001$; RMSEA $= .069$, CFI $= .984$, TLI $= .974$, SRMR $= .024$.

Social integration. The social integration of new employees was evaluated by using Morrison's (2002) seven-item scale. According to Morrison, these are representative indicators of new hires' attachment and sense of belonging. The items are scored on a five-point Likert scale, with 1 representing 'Strongly disagree' and 5 representing 'Strongly agree'. Notably, three scale items indicate negative social integration and must, therefore, be re-coded. A representative item on the scale is "I feel accepted by my co-workers." Individual item scores are added together to determine the overall score on the scale. Based on the results, the scale showed good internal consistency (Cronbach's $\alpha = .858$). The findings of confirmatory factor analysis (with the inclusion of two residual covariances) supported its unidimensional structure: $\chi^2 = 47.56$, df $= 12$, $p < .001$; RMSEA $= .076$, CFI $= .981$, TLI $= .963$, SRMR $= .032$.

Task mastery. A six-item scale created by Morrison (2002) to assess the new hires' ability and confidence in carrying out their tasks was used to evaluate task mastery. The participants were asked to rate all the items by using a five-point Likert scale, where a rating of 1 indicated 'Strongly disagree', and a rating of 5 indicated 'Strongly agree'. An illustrative item from the scale is "I feel competent conducting my job assignments." One item represented a negative expression of task mastery, requiring its re-coding for the subsequent analyses. The sum of the individual item scores produced the final task mastery score. The items in this instrument had sufficient internal consistency (Cronbach's $\alpha = .840$). The structure of the scale was evaluated through confirmatory factor analysis with one additional residual covariance, yielding favorable results: $\chi^2 = 15.443$, df $= 8$, $p = .051$; RMSEA $= .040$, CFI $= .995$, TLI $= .991$, SRMR $= .015$.

Organizational culture knowledge. When developing the questionnaire for this study, it was difficult to find a tool which would assess a newcomer's level of organizational culture knowledge – a comprehensive understanding and awareness of the culture within their organization. The available instruments could measure the qualitative aspect of organizational culture – i.e., what the culture is like within an organization – but this study focuses more on a newcomer's understanding of it, specifically, the degree to which they believe they have grasped it. In the context of this study, a new instrument was developed to evaluate this aspect. The first step involved choosing an organizational culture framework. The main priority was given to a concise framework of organizational culture, highlighting the most important aspects of it, which led to the selection of the seven elements of organizational culture identified by Sinha (2008): values, behavior, relationships, technology, structure, procedure, goals, and objectives. For each of these components, a single general item was developed. In total, seven items were designed to reflect the employee's level of confidence in their understanding of each aspect of organizational culture. Examples of such items are "I am confident that I know what values my organization is guided by" and "I am confident that I know what behavioral norms exist in my organization." Appendix 2 lists all the items used in this research study. The respondents were asked to rate each item on a five-point Likert scale, with 1 representing 'Strongly disagree', and 5 representing 'Strongly agree'. The cumulative score of all items was used in subsequent analyses, with a higher score indicating a higher perceived level of organizational culture knowledge. The results showed that the items had excellent internal consistency (Cronbach's $\alpha = .913$), and a confirmatory factor analysis adequately confirmed the instrument's unidimensional structure: $\chi^2 = 65.181$, df = 14, p <.001; RMSEA = .080, CFI = .978, TLI = .967, SRMR = .024.

Occupational stress. The *Perceived Occupational Stress* (POS) scale created by Marcatto and others (2022) was used to measure new employees' stress levels. This instrument consists of four items, the sum of which, when taken together, indicates the level of stress experienced (with a higher rating denoting a higher level of stress). Respondents were asked to rate the presented items on a five-point scale, where 1 indicates 'Strongly disagree', and 5 indicates 'Strongly agree'. "My work is stressful" is an illustration of a scale item. The results were favorable in terms of the scale items' internal consistency (Cronbach's $\alpha = .893$). With the addition of one residual covariance, confirmatory factor analysis showed that the scale had a stable

structure: χ^2 = .528, df = 1, p = .467; RMSEA = .01, CFI = .99, TLI = .99, SRMR = .002.

Organizational commitment. The commitment of new employees to the organization was assessed using the O'Reilly and Chatman (1986) scale, which identifies three dimensions of organizational commitment: compliance (instrumental involvement due to external rewards), identification (participation based on a desire to belong), and internalization (participation based on an alignment between personal and organizational values). The scale consists of 12 items in total: 4 items for compliance (e.g., "Unless I am rewarded for it in some way, I see no reason to expend extra effort on behalf of this organization"), 3 items for identification (e.g., "I am proud to tell others that I am a part of this organization"), and 5 items for internalization (e.g., "The reason I prefer this organization to others is because of what it stands for, that is, its values"). All statements were rated on a 5-point Likert scale, where 1 indicated 'Strongly Disagree', and 5 indicated 'Strongly Agree'. In further analyses, scores for each of the three dimensions were summed separately, with higher scores showing higher levels of the respective dimension. It is important to note that, although confirmatory factor analysis adequately validated the scale's structure (χ^2 = 283.219, df = 51, p <.001; RMSEA = .089, CFI = .931, TLI = .911, SRMR = .027), the internal consistency for the compliance items was relatively low (Cronbach's α = .467). This was in contrast to identification (Cronbach's α = .812) and internalization (Cronbach's α = .891). To avoid inaccuracies in interpreting the results, further analyses only utilized data from the identification and internalization dimensions.

Turnover intentions. Three general items were used to assess the intention of new employees to quit their current jobs, for example, "I often think about quitting my current job" (a complete list is provided in Appendix 2). Each of the items had to be evaluated on a 5-point scale (where 1 indicated 'Strongly Disagree', and 5 denoted 'Strongly Agree'). A higher total score indicated a stronger intent to quit the current position. The internal consistency of items was sufficient (Cronbach's α = .895).

Job satisfaction. New employees' job satisfaction was measured by one item: "How satisfied are you with your job in general?". This item was evaluated on a 10-point scale, with higher scores indicating greater overall job satisfaction.

Organizational insider status. A single generic item was used to assess the newcomers' perception of how much they felt like an organizational insider: "Considering your experience in this organization, to what extent do you currently feel like a true insider of the organization?". This statement was rated on a 10-point scale, with 1 indicating that the participant still felt like a newcomer and 10 showing that the participant felt like a true member of an organization.

2.4.4. Summary of variables

All the variables evaluated in the study are listed in Figure 4. This figure also illustrates their interrelationships based on the developed research model. The names of these variables, as presented, will be used in the subsequent data analysis.
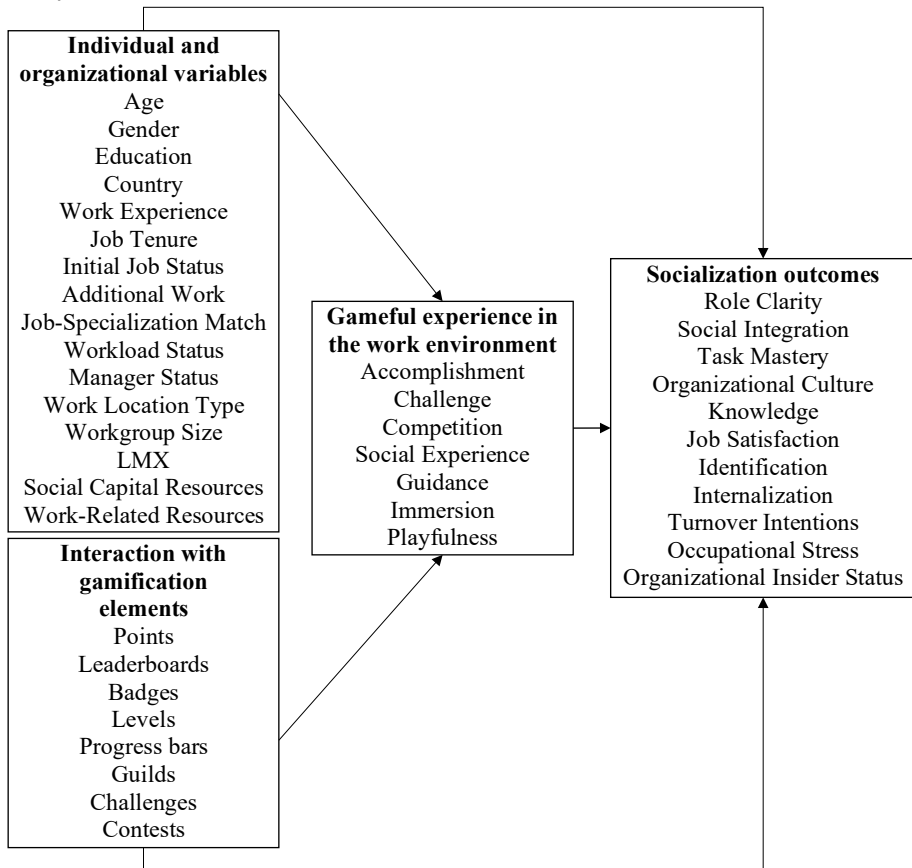

Figure 4. *List of variables and their interrelationships*

2.5. Data Analysis

The data processing was executed by using *IBM SPSS Statistics 24.0* and *IBM AMOS Graphics 26.0* software. The overall data report utilized descriptive statistics, including *means* (M), *standard deviations* (SD), and *percentages of response rates* (%). The dataset was generally found to be normally distributed. This assessment was done by considering a range of indicators, such as skewness and kurtosis values, visual inspections, and Q-Q (quantile-quantile) plots. The values for skewness and kurtosis obtained were within the range of ±1.0. George and Mallery (2019) indicate that, for most psychometric purposes, having kurtosis and skewness values within a range of ±1.0 is optimal.

Certain psychometric procedures were employed to evaluate the study's measures. The reliability of the instruments was verified by assessing their internal consistency using Cronbach's α. Confirmatory Factor Analysis (CFA) was conducted to validate the factor structure of the measurements. To evaluate the model fit in the CFA, several indicators were taken into account, including the *Comparative Fit Index* (CFI), the *Tucker-Lewis Index* (TLI), the *Root Mean Square Error of Approximation* (RMSEA), and the *Standardized Root Mean Square Residual* (SRMR). Good model fit is indicated by CFI and TLI values above .95 (acceptable above .90), RMSEA values below .05 (acceptable below .08), and SRMR values below .08 (Schweizer, 2010). It is important to add that while the Chi-Square test is a traditional measure for evaluating the overall model fit, typically indicating a good fit with an insignificant result at the .05 threshold, its sensitivity to the sample size means that it almost always rejects the model in cases of large samples (Hooper et al., 2008).

Moreover, the Pearson correlation coefficient was used to measure the relationship between continuous variables, while cross-tabulation with the Chi-square test was employed to explore relationships between categorical variables. Intergroup differences were evaluated by the Student t-test, or by univariate analysis of variance (ANOVA). Additionally, linear regression analysis with a backward procedure was employed to assess the interdependence of the variables. To further understand the more complex relationships, the final research model was conducted via path analysis. The model fit was evaluated based on the previously mentioned criteria: RMSEA, CFI, TLI, and SRMR.

Finally, Two-Factor Clustering identified interaction patterns with gamification elements in the dataset, while focusing on the Average Silhouette Width. A coefficient near 1.0 indicates strong cluster formation, while an Average Silhouette Width around .50 or higher, as noted by Kaufman and Rousseeuw (1990), signifies a reasonable structure.

3. RESULTS

In this section, the study results are presented according to the following structure:

    1. Firstly, the analysis focuses on the self-assessment data provided by new employees regarding the gamification elements they encounter in the new workplace, identifying trends in their interaction with these elements.

    2. Then, an assessment is made of how this interaction with gamification elements, along with other socialization context variables, is related to the gameful experience in the work environment.

    3. Following the same approach, the relationships between newcomers' socialization outcomes and both individual and organizational variables, as well as gamification-related variables, are determined.

    4. Lastly, after examining all preceding analyses, the variables that exhibit the best predictive qualities are selected. Subsequently, a model is created which incorporates the established relationships between the socialization context (including gamification elements), gameful experience in the work environment, and socialization outcomes.

Sample diversity and its implications for data analysis

Although subsequent sections will examine intergroup differences that may impact data analysis, preemptively highlighting specific findings about the study sample can enhance data comprehension and ensure a more informed understanding of the analysis context. As presented in the methodology section, the sample itself is quite diverse, consisting of respondents of different genders, countries, types of managerial positions, and lengths of tenure in the current organization. There were only two statistically significant differences identified when examining the differences in socialization outcomes among these groups (as discussed in Chapter 3.3.): employees with subordinates experienced more stress, and perceptions of being an organizational insider varied according to the job tenure. The differences in stress levels among managers may reflect the challenges inherent in leadership roles. Meanwhile, although statistical differences exist between job tenure groups in terms of insider perceptions, a mere 1-point increase on a 10-point scale suggests that these changes are essentially marginal and could be logically explained. Therefore, it would be reasonable to conclude that the study sample is sufficiently homogeneous for all set objectives.

3.1. New Employees' Interaction with Gamification Elements Patterns

The analysis of the results begins with examining the nature of new employees' interaction with gamification elements in their work environment. First, the respondents had to self-assess which of the most popular gamification elements they encountered in their current position. More than half of the respondents (N = 348) reported coming into contact with at least one gamification element from a given list. On average, these newcomers encountered 2.18 gamification elements in their workplace (SD = 1.35). Table 7 provides a detailed breakdown of the extent of interaction with gamification elements.

Table 7. *Distribution of the total number of encountered gamification elements*

Number of gamification elements	N (%)
0	227 (39.48)
1	146 (25.39)
2	85 (14.78)
3	60 (10.43)
4	32 (5.57)
5	18 (3.13)
6	4 (0.70)
7	2 (0.35)
8	1 (0.17)

After analyzing the different gamification elements, it was determined that Guilds (N = 152) and Progress bars (N = 150) were the most common, whereas Challenges were the least common (N = 42). Table 8 displays a detailed distribution of all gamification elements.

Table 8. *Number of encountered gamification elements by type*

Gamification element	N
Guilds	152
Progress bars	150
Badges	103
Contests	103
Levels	83
Leaderboards	65
Points	62
Challenges	42

To further assess new employees' interaction with gamification elements in the workplace, every element that the respondents encountered was additionally appraised based on two criteria: the frequency of encounters, and

the level of active engagement with these elements. The average frequency score was 3.49 (SD = 1.24), and the average engagement score was 3.38 (SD = 1.26).

For a more comprehensive view of how newcomers interact with gamification elements in their work environment, the data were organized into distinct clusters. This segmentation was achieved by using the *TwoStep* clustering algorithm, which categorized respondents based on the total number of elements encountered, as well as on the average frequency of interaction and the average level of engagement with these elements. In total, models with 2, 3, and 4 cluster solutions were tested. Upon further analysis, the 2-cluster model was selected, considering that it had the highest average silhouette score (0.5) and, therefore, provided the most accurate classification of the data.

According to the applied classification strategy, the first group of respondents (N = 196) was characterized by a relatively higher number of encounters with gamification elements (M = 2.77, SD = 1.47), as well as a higher frequency (M = 4.25, SD = 0.92) and higher engagement (M = 3.99, SD = 1.01) with them. In contrast, the second group's results (N = 152) were the opposite, marked by a relatively lower number of encounters with gamification elements (M = 1.43, SD = 0.63), a lower frequency (M = 2.50, SD = 0.92) and lower engagement (M = 2.60, SD = 1.01) with them. These groups will be referred to as 'Higher Interaction' and 'Lower Interaction', respectively.

An additional contingency table analysis was performed to understand the structure of these clusters better. This analysis aimed to determine how the gamification elements encountered in the work environment are distributed across the two groups. The results (Table 9) indicate that, in all cases, there is a disproportionate distribution within the clusters – the 'Higher Interaction' group consistently shows a greater presence of each of the gamification elements used in the study compared to the 'Lower Interaction' group.

These findings not only validate the structure of the obtained clusters but also demonstrate that the clusters are homogeneous in terms of the the gamification elements encountered. Consequently, in further analysis, the clusters can be interpreted as a cohesive entity, regardless of the specific gamification elements that constitute them.

The remaining study participants (N = 227), who did not encounter any gamification element from the given list in their work environment, were termed the 'Undetected Interaction' group. Considering that the participants were presented with a limited number of gamification elements and were

required to conduct their subjective comprehension evaluations, this group will be included in the further analysis as a reference group.

Table 9. *Distribution of encounters with different gamification elements*

Gamification element	Higher Interaction (N = 196)	Lower Interaction (N = 152)	χ^2	p
Points	48	14	13.65	<.001
Leaderboards	52	13	18.22	<.001
Badges	76	27	18.14	<.001
Levels	63	20	16.99	<.001
Progress bars	102	48	14.62	<.001
Guilds	102	50	12.76	<.001
Challenges	32	10	7.67	.004
Contests	67	36	4.23	.022

3.2. Aspects of Newcomers' Gameful Experience in the Work Environment

3.2.1. Relationships between the socialization context and gameful experience in the work environment

After determining how new employees interact with gamification elements in their work environment, the next step was to examine how these interaction patterns are related to the dimensions of gameful experience[4]. Table 10 presents the descriptive statistics and intercorrelations of gameful experience scores.

Table 10. *Mean scores, standard deviations, and intercorrelations of gameful experience dimensions*

Gameful experience	M (SD)	1	2	3	4	5	6	7
1. Playfulness	9.14 (3.02)	–	.558**	.498**	.523**	.183**	.443**	.465**
2. Social Experience	10.49 (2.84)		–	.742**	.624**	.073	.558**	.704**
3. Guidance	10.59 (2.63)			–	.637**	.139**	.644**	.795**
4. Immersion	8.50 (2.83)				–	.350**	.642**	.624**
5. Competition	6.06 (3.15)					–	.304**	.153**
6. Challenge	10.12 (3.07)						–	.734**
7. Accomplishment	10.94 (2.88)							–

Note. ** p <.01; * p <.05. The minimum possible value for all scales is 3, and the maximum value is 15

The results indicate that, in most cases, gameful experience dimensions are interconnected through positive relationships, with varying degrees of

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[4] To maintain clarity and precision, the term 'gameful experience' will specifically denote "gameful experience in the work environment" within the Results section.

strength from weak to relatively strong (coefficient r ranges from .139 to .795). However, the results for the Competition and Social Experience dimensions stand out, by showing that newcomers' experience of competition in the workplace is not related to the sense of social connectedness.

The comparison conducted among distinct groups based on their interaction with gamification elements and the dimensions of gameful experience (Table 11) revealed several trends. Notably, the 'Lower Interaction' group had higher ratings across all gameful experience dimensions compared to the 'Undetected Interaction' group. A similar pattern was observed between the 'Higher Interaction' and 'Undetected Interaction' groups, with the exception that no differences were found in the Playfulness, Social Experience, Immersion, and Guidance dimensions.

Table 11. *Intergroup differences in gameful experience according to the characteristics of interaction with gamification elements*

Gameful experience	A Undetected Interaction M (SD)	B Lower Interaction M (SD)	C Higher Interaction M (SD)	F^1	p	Post Hoc Bonferroni[2]
Playfulness	8.82 (3.20)	9.60 (2.75)	9.00 (3.02)	3.732	.025	B>A
Social Experience	10.12 (3.02)	10.88 (2.70)	10.51 (2.68)	3.810	.023	B>A
Guidance	10.13 (2.84)	11.07 (2.44)	10.66 (2.44)	6.822	.001	B>A
Immersion	8.31 (2.92)	9.04 (2.87)	8.10 (2.54)	5.697	.004	B>A, B>C
Competition	5.43 (2.92)	7.06 (3.41)	5.72 (2.81)	16.153	<.001	B>A, C>A
Challenge	9.42 (3.23)	10.72 (2.91)	10.38 (2.81)	10.478	<.001	B>A, C>A
Accomplishment	10.28 (3.01)	11.55 (2.64)	11.14 (2.80)	11.143	<.001	B>A, C>A

Note. [1] df = 2, 572. [2] The mean difference is significant at the .05 level

To better understand new employees' gameful experience dimensions in the workplace, it is also necessary to ascertain how they relate to the socialization context (individual and organizational variables). Initially, the analysis employed the Student's t-test (for two groups) and one-factor analysis of variance (ANOVA; for more than two groups) to identify any existing intergroup differences. The complete results are presented in Appendices 3 and 6; however, it can be noted that the sample was homogeneous in most cases. Nevertheless, the differences that were found indicate that men (M = 6.57, SD = 3.28) viewed their workplace as containing more competitive rivalry than women (M = 5.58, SD = 2.94) did; t(573) = 3.817, p <.001. Also, new full-time employees perceived that they faced greater challenges (M = 10.35, SD = 3.02) and competition (M = 6.21, SD = 3.18) in their work environment than part-time employees, who reported lower levels of perceived challenges (M = 9.32, SD = 3.09, t(573) = -3.385, p <.001) and

competition (M = 5.56, SD = 2.97, t(573) = -2.069, p = .039). A similar pattern emerged among new employees with subordinates: they reported higher scores in both the Challenge (M = 9.94, SD = 3.06 vs. M = 10.56, SD = 3.03; t(573) = -2.219, p = .027) and Competition (M = 5.75, SD = 3.01 vs. M = 6.84, SD = 3.34; t(573) = -3.804, p <.001) dimensions compared to their counterparts without subordinates. Finally, analysis of the workgroup size showed significant differences in Social Experience scores between newcomers working alone (M = 8.87, SD = 3.34) and those working in medium (M = 10.51, SD = 2.72) or large groups (M = 10.76, SD = 2.82). Employees who are not a part of any workgroup perceived less social connectedness in their work environment than those in the latter two groups; F(3, 571) = 24.698, p = .026.

Examination of intergroup differences also revealed that a match between the job specialization and the current position was a significant distinguishing factor. Across most measured dimensions, new employees in well-aligned positions reported higher gameful experience scores compared to their counterparts in less-aligned roles. Specifically, new employees whose specialization matched their current position scored higher in Playfulness (M = 9.53, SD = 2.88 vs. M = 8.20, SD = 3.16; t(573) = -4.906, p = <.001), Social Experience (M = 10.83, SD = 2.67 vs. M = 9.67, SD = 3.07; t(573) = -4.534, p = <.001), Guidance (M = 10.89, SD = 2.52 vs. M = 9.88, SD = 2.76; t(573) = -4.269, p = <.001), Immersion (M = 8.70, SD = 2.73 vs. M = 8.04, SD = 3.01; t(573) = -2.555, p = .011), Challenge (M = 10.50, SD = 2.91 vs. M = 9.20, SD = 3.24; t(573) = -4.731, p = <.001), and Accomplishment (M = 11.28, SD = 2.66 vs. M = 10.12, SD = 3.21; t(573) = -4.502, p = <.001) dimensions than those whose specialization did not match the nature of their current job. The Competition dimension did not show significant differences in this trend.

The subsequent analysis included an assessment of the relationships between continuous socialization context variables and gameful experience dimensions. The mean and standard deviation scores of organizational variables were as follows: LMX (M = 25.52, SD = 5.71), Work-Related Resources (M = 26.04, SD = 5.95), Social Capital Resources (M = 14.02, SD = 3.54). Pearson correlation results, detailed in Table 12, indicated that socialization resources and LMX demonstrated significant correlations – ranging from weak to moderately strong – with the dimensions of gameful experience. Specifically, LMX (coefficient r ranges from .297 to .541), Work-Related Resources (coefficient r ranges from .349 to .641), and Social Capital Resources (coefficient r ranges from .389 to .596) positively correlated with all dimensions of gameful experience, with the exception of Competition.

Table 12. *Pearson correlation coefficients between continuous socialization context variables and gameful experience dimensions*

Gameful experience	Age	Job Tenure	LMX	Work-Related Resources	Social Capital Resources
Playfulness	.057	.035	.377**	.349**	.389**
Social Experience	.025	.011	.541**	.600**	.596**
Guidance	.000	-.009	.527**	.641**	.559**
Immersion	.043	.017	.315**	.478**	.421**
Competition	-.063	.061	-.062	.005	.060
Challenge	-.042	.038	.297**	.388**	.438**
Accomplishment	-.043	.011	.465**	.581**	.554**

Note. ** p < .01; * p < .05

3.2.2. Factors predicting gameful experience in the work environment

All independent variables demonstrating a univariate relationship with the dimensions of gameful experience in the previous section were preselected for constructing linear regression models. For dichotomous categorical variables, the coding system applied was as follows: Gender (0 for males, 1 for females), Job-Specialization Match (0 for matched specialization, 1 for unmatched specialization), Workload Status (0 for part-time, 1 for full-time), and Manager Status (0 for no subordinates, 1 for having subordinates). The regression models also factored in two gamification interaction groups – 'Lower Interaction' and 'Higher Interaction' – as separate variables (where 0 indicated non-membership and 1 indicated membership), with the 'Undetected Interaction' group serving as the reference category and thus excluded from the models. Similarly, the Workgroup Size was categorized into three groups (individual work, medium, and large workgroups) and incorporated into the regression models as separate variables (where 0 indicated non-membership and 1 indicated membership), while the small workgroup category was used as the reference group and was not included. The regression models were developed by using the Backward elimination method. Table 13 presents the results of the final models. Overall, these models accounted for the variance in gameful experience dimensions with reasonable accuracy, explaining between 21.6% and 49.2% of the variability in the dependent variables. The exception was the Competition dimension, where the independent variables accounted for only 9.3% of the variance. Considering this, the latter variable will be discussed in the limited predictive context.

Table 13. *Final regression models of gameful experience dimensions with individual, organizational, and interaction with gamification elements variables as predictors*

Dependent variable (model results)	Group*	Independent variables	ß	t	p	VIF
Playfulness (R^2 = .216, F = 39.367, df = 4 / 570, p <.001)	I/O	Social Capital Resources	.247	5.740	<.001	1.347
	I/O	LMX	.237	5.564	<.001	1.323
	I/O	Job-Specialization Match	.118	3.125	.002	1.039
	GElm	Higher Interaction	.065	1.715	.087	1.032
Social Experience (R^2 = .475, F = 129.047, df = 4 / 570, p <.001)	I/O	LMX	.264	7.285	<.001	1.427
	I/O	Work-Related Resources	.272	5.862	<.001	2.342
	I/O	Social Capital Resources	.258	5.645	<.001	2.262
	I/O	Job-Specialization Match	.083	2.675	.008	1.053
Guidance (R^2 = .492, F = 91.511, df = 6 / 568, p <.001)	I/O	Work-Related Resources	.438	9.538	<.001	2.350
	I/O	LMX	.241	6.740	<.001	1.433
	I/O	Job-Specialization Match	.094	3.060	.002	1.059
	I/O	Social Capital Resources	.093	2.040	.042	2.372
	GElm	Higher Interaction	.106	3.151	.002	1.274
	GElm	Lower Interaction	.083	2.488	.013	1.242
Immersion (R^2 = .255, F = 47.718, df = 4 / 570, p <.001)	I/O	Work-Related Resources	.342	6.208	<.001	2.312
	I/O	Social Capital Resources	.117	2.138	.033	2.266
	I/O	LMX	.084	1.949	.052	1.404
	GElm	Higher Interaction	.087	2.365	.018	1.032
Competition (R^2 = .093, F = 19.552, df = 3 / 571, p <.001)	I/O	Manager Status	.142	3.547	<.001	1.004
	I/O	Gender	-.133	-3.330	.001	1.010
	GElm	Higher Interaction	.218	5.457	<.001	1.004
Challenge (R^2 = .250, F = 26.972, df = 7 / 567, p <.001)	I/O	Social Capital Resources	.237	4.218	<.001	2.391
	I/O	Work-Related Resources	.214	3.857	<.001	2.321
	I/O	Job-Specialization Match	.117	3.045	.002	1.125
	I/O	Manager Status	.081	2.157	.031	1.053
	I/O	Workload Status	.066	1.667	.096	1.185
	GElm	Higher Interaction	.125	3.039	.002	1.276
	GElm	Lower Interaction	.114	2.805	.005	1.259
Accomplishment (R^2 = .430, F = 71.316, df = 6 / 568, p <.001)	I/O	Work-Related Resources	.340	7.004	<.001	2.350
	I/O	LMX	.184	4.856	<.001	1.443
	I/O	Social Capital Resources	.180	3.729	<.001	2.327
	I/O	Job-Specialization Match	.107	3.280	.001	1.059
	GElm	Higher Interaction	.141	3.947	<.001	1.274
	GElm	Lower Interaction	.123	3.483	.001	1.242

Note. *Column abbreviations: I/O (individual and organizational variables), GElm (Gamification elements)

Firstly, interaction with gamification elements did not always predict the scores of the gameful experience dimensions. Regardless of the type of interaction, engaging with gamification elements was associated with slightly higher scores in the Guidance, Challenge, and Accomplishment dimensions (ß ranging from .083 to .141). Additionally, belonging to the 'Higher

Interaction' group was also linked with a relatively greater likelihood of respondents rating the Immersion (ß = .087) and Competition (ß = .218) dimensions higher. It is worth noting that engaging with gamification elements in the workplace did not predict the newcomers' experience of playfulness or social connectedness at work.

Contrarily, socialization resources and relationships with supervisors played a much more significant role in predicting the gameful experience. For new employees, possessing both greater social capital resources and work-related resources predicted, to varying degrees, higher scores in the Social Experience, Guidance, Immersion, Challenge, and Accomplishment dimensions (ß ranging from .093 to .438). The exception was the Playfulness dimension, which was predicted only by Social Capital Resources (ß = .247), and the Competition dimension, which was not explained by socialization resources at all. In terms of supervisor relationships, the higher is the quality of the relationship that new employees have with their supervisors, the more likely they are to perceive their work environment as playful (ß = .237), socially connected (ß = .264), with clearer guidance (ß = .241), and more orienting towards achievements (ß = .184).

Regarding the additional organizational and individual variables, the Job-Specialization Match emerged as particularly significant. Although its effect is modest (ß ranging from .083 to .118), when newcomers work in roles that align with their specialization, it is associated with increased scores in Playfulness, Social Experience, Challenge, and Accomplishment. Furthermore, having subordinates corresponded with marginally higher scores in the Challenge (ß = .081) and Competition (ß = .142) dimensions. The latter dimension was also weakly predicted by gender (ß = -.133), with men perceiving their work environment as more competitively charged.

3.3. Aspects of Newcomers' Socialization Outcomes

3.3.1. Relationships between individual and organizational variables and socialization outcomes

This section aims to explore in greater detail the socialization outcomes within the examined sample, as well as their relationship with the socialization context (individual and organizational variables). Initially, Table 14 provides the descriptive statistics and the intercorrelations of the socialization outcomes.

The findings reveal a tight interconnection among these variables, evidenced by all correlation coefficients being statistically significant. The

strength of these relationships ranged from weak to moderately strong, with coefficient values spanning from .098 to -.711. Nearly all relationships among the variables were positive, with the notable exceptions of Occupational Stress (coefficient r ranges from -.130 to -.443) and Turnover Intentions (coefficient r ranges from -.153 to -.711), which negatively correlated with the other socialization outcomes.

Table 14. *Mean scores, standard deviations, and intercorrelations of socialization outcomes*

	M (SD)	2	3	4	5	6	7	8	9	10
1. RC	22.90 (4.35)	.467**	.582**	.611**	.529**	.427**	.351**	-.390**	-.351**	.441**
2. SI	24.64 (5.51)	–	.350**	.422**	.521**	.430**	.340**	-.267**	-.399**	.529**
3. TM	22.94 (4.27)		–	.323**	.314**	.142**	.098*	-.431**	-.153**	.291**
4. OCK	25.06 (5.62)			–	.583**	.631**	.572**	-.317**	-.410**	.473**
5. JS	6.91(2.00)				–	.654**	.504**	-.443**	-.711**	.523**
6. ID	9.55 (2.99)					–	.785**	-.259**	-.545**	.487**
7. INT	15.07 (4.85)						–	-.130**	-.389**	.439**
8. OS	10.66 (4.21)							–	-.374**	-.191**
9. TI	7.09 (4.21)								–	-.338**
10. OIS	5.43 (2.24)									–

Note. ** p <.01; * p <.05. The abbreviations, the minimum (Min) and maximum (Max) possible values of the scales: RC (Role Clarity; Min: 6, Max: 30), SI (Social Integration; Min: 7, Max: 35), TM (Task Mastery; Min: 6, Max: 30), OCK (Organizational Culture Knowledge; Min: 7, Max: 35), JS (Job Satisfaction; Min: 1, Max: 10), ID (Identification; Min: 3, Max: 15), INT (Internalization; Min: 5, Max: 25), OS (Occupational Stress; Min: 4, Max: 20), TI (Turnover Intentions; Min: 3, Max: 15), and OIS (Organizational Insider Status; Min:1, Max: 10)

To gain a deeper insight into how these socialization outcomes vary among the surveyed new employees, intergroup comparison criteria were utilized: the Student's t-test (for two groups) and ANOVA (for more than two groups). The results are detailed in Appendices 4–6. When assessing intergroup differences in proximal socialization outcomes, only minimal variations were found, thus indicating that the study's sample was relatively homogeneous concerning these variables. First, new employees whose specialization matched their jobs had higher scores in Social Integration (M = 23.46, SD = 5.45 vs. M = 25.13, SD = 5.47; t(573) = -3.349, p = .001) and Organizational Culture Knowledge (M = 24.44, SD = 5.65 vs. M = 26.74, SD = 5.47; t(573) = -4.557, p = <.001). It is worth noting that part-time workers (M = 23.63, SD = 4.22) had a clearer understanding of their job roles compared to full-time employees (M = 22.69, SD = 4.37; t(573) = 2.175, p = .030). Finally, certain differences were noted among the work group sizes: employees in larger groups had higher Role Clarity scores than those in medium-sized groups (M = 22.24, SD = 4.43 vs. M = 23.53, SD = 4.34; F(3, 571) = 3.554, p = .014), and also, those working in larger groups had higher

Social Integration scores compared to employees working individually (M = 22.00, SD = 5.36 vs. M = 25.36, SD = 5.63; $F_{(3, 571)}$ = 2.874, p = .036).

Similarly, the study was relatively homogeneous when evaluating distal socialization outcomes, as only a few intergroup differences were detected. Firstly, new employees with academic degrees scored higher in Internalization (M = 14.36, SD = 4.83 vs. M = 15.40, SD = 4.83; t(573) = -2.409, p = .016) and Occupational Stress (M = 10.03, SD = 4.24 vs. M = 10.95, SD = 4.17; t(573) = -2.453, p = .014) compared to their counterparts without such degrees. Additionally, higher stress levels were observed in newcomers working full-time compared to those in part-time positions (M = 9.72, SD = 3.99 vs. M = 10.93, SD = 4.23; t(573) = -2.921, p = .004), as well as among those with subordinates versus those without subordinates (M = 10.27, SD = 4.07 vs. M = 11.61, SD = 4.39; t(573) = -3.509, p <.001). Most notably, significant differences emerged in relation to the Job-Specialization Match variable, revealing that employees whose specialization matched their job roles had higher scores in Job Satisfaction (M = 6.07, SD = 2.32 vs. M = 7.26, SD = 1.74; t(573) = -6.775, p <.001), Identification (M = 8.55, SD = 3.07 vs. M = 9.98, SD = 2.85; t(573) = -5.335, p <.001), Internalization (M = 14.05, SD = 4.89 vs. M = 15.50, SD = 4.77; t(573) = -3.310, p <.001), and Organizational Insider Status (M = 5.01, SD = 2.31 vs. M = 5.61, SD = 2.19; t(573) = -2.968, p = .003). Additional analysis of the job tenure categories revealed that Organizational Insider Status was the only socialization outcome variable in which the participants differed according to the amount of time they had worked in their current organization (Appendix 6).

In the subsequent part of the analysis, the focus was on examining the relationships between the socialization outcomes and continuous socialization context variables – age, job tenure, LMX, and socialization resources. The results of Pearson correlation coefficients are presented in Table 15. It is important to emphasize that all socialization outcomes were significantly related to the LMX, Work-Related Resources, and Social Capital Resources scores. These relationships varied from weak to moderately strong (coefficient r ranges from .197 to .674) and were often positive, except for two variables where the relationship was negative – namely, Occupational Stress (coefficient r ranges from -.231 to -.350), and Turnover Intentions (coefficient r ranges from -.372 to -.399). Finally, the length of time a new employee has worked in a new organization was relatively weakly associated with higher scores in Task Mastery (r = .086), Occupational Stress (r = .090), and Organizational Insider Status (r = .177). Meanwhile, newcomers' age was associated with a weak positive relationship with organizational commitment

(coefficient r ranges from .083 to .097) and negatively with intentions to leave the job (r = -.109).

Table 15. *Pearson correlation coefficients between continuous socialization context variables and socialization outcomes*

	Age	Job Tenure	LMX	Work-Related Resources	Social Capital Resources
Role Clarity	-.058	.043	.467**	.674**	.445**
Social Integration	.029	.074	.439**	.473**	.449**
Task Mastery	-.027	.086*	.303**	.346**	.197**
Organizational Culture Knowledge	-.041	-.049	.513**	.595**	.557**
Job Satisfaction	.041	.009	.511**	.555**	.496**
Identification	.097*	.016	.414**	.534**	.517**
Internalization	.086*	-.010	.340**	.466**	.460**
Occupational Stress	.017	.090*	-.350**	-.314**	-.231**
Turnover Intentions	-.109**	.035	-.391**	-.399**	-.372**
Organizational Insider Status	-.009	.177**	.389**	.453**	.405**

Note. ** p <.01; * p <.05

3.3.2. Relationships between gamification-related variables and socialization outcomes

The further analysis of socialization outcomes aimed to clarify their association with gamification-related variables. Initially, Pearson correlation was utilized to examine the relationship between the gameful experience dimensions and the socialization outcomes of new hires (Table 16). Based on the results, it can be inferred that the dimensions of Playfulness, Social Experience, Guidance, and Accomplishment were all statistically significant in relation to the examined socialization outcomes. A common trend was noted across these four dimensions: each showed a positive correlation with most socialization outcomes. Specifically, correlation coefficients ranged from .126 to .466 for Playfulness, .197 to .635 for Social Experience, .268 to .627 for Guidance, and .212 to .630 for Accomplishment. Exceptions were noted in the cases of Occupational Stress and Turnover Intentions, where the correlations were negative. In these instances, the correlation coefficients were as follows: -.209 and -.329 for Playfulness, -.263 and -.479 for Social Experience, -.235 and -.438 for Guidance, and -.177 and -.447 for Accomplishment. A similar pattern emerged for the Immersion dimension, which demonstrated a positive correlation with almost all socialization outcomes, exhibiting correlation coefficients ranging from .111 to .541. The

sole exception was Turnover Intentions, where the correlation was negative (r = -.380). However, a significant correlation with Occupational Stress was not observed.

Finally, the Competition dimension exhibited the weakest correlations with outcomes of new employees' socialization. Statistically significant relationships were observed only with Social Integration, Task Mastery, Internalization, Occupational Stress, and Organizational Insider Status. Although these relationships are relatively weak (coefficient r ranges from -.085 to .194), they still offer valuable insights. A perception of the work environment as competitive was linked to higher levels of stress experienced by new employees (r = .194). However, it also correlated positively with greater alignment between personal and organizational values (r = .113), as well as a stronger sense of being an integral member of the organization (r = .137). In terms of factors relevant to proximal socialization outcomes, the Competition dimension showed a negative correlation with Social Integration (r = -.085) and Task Mastery (r = -.101).

Table 16. *Pearson correlation coefficients between gameful experience dimension and socialization outcomes*

	Playfulness	Social Experience	Guidance	Immersion	Competition	Challenge	Accomplishment
RC	.272**	.491**	.598**	.409**	.001	.321**	.506**
SI	.349**	.568**	.454**	.369**	-.085*	.333**	.454**
TM	.126**	.197**	.268**	.111**	-.101*	-.013	.212**
OCK	.439**	.635**	.627**	.485**	.062	.471**	.630**
JS	.466**	.623**	.617**	.504**	-.009	.442**	.603**
ID	.463**	.603**	.550**	.541**	.053	.450**	.572**
INT	.387**	.509**	.471**	.502**	.113**	.406**	.499**
OS	-.209**	-.263**	-.235**	-.076	.194**	.104*	-.177**
TI	-.329**	-.476**	-.438**	-.380**	.053	-.349**	-.447**
OIS	.379**	.509**	.462**	.447**	.137**	.372**	.456**

Note. ** p <.01; * p <.05. The tables utilize the following abbreviations: RC (Role Clarity), SI (Social Integration), TM (Task Mastery), OCK (Organizational Culture Knowledge), JS (Job Satisfaction), ID (Identification), INT (Internalization), OS (Occupational Stress), TI (Turnover Intentions), and OIS (Organizational Insider Status)

The subsequent step was to analyze how the socialization outcomes of new hires differ based on the distinguished interaction with gamification groups: 'Higher Interaction', 'Lower Interaction', and 'Undetected

Interaction'. ANOVA analysis was utilized for this evaluation, and its results are presented in Table 17.

Table 17. *Intergroup differences in socialization outcomes according to the characteristics of interaction with gamification elements*

Socialization outcome	A Undetected Interaction M (SD)	B Lower Interaction M (SD)	C Higher Interaction M (SD)	F^1	p	Post Hoc Bonferroni[2]
RC	22.64 (4.61)	23.52 (4.30)	22.50 (3.95)	3.064	.047	
SI	24.18 (5.64)	25.41 (5.33)	24.32 (5.48)	3.006	.050	
TM	23.22 (4.19)	23.13 (4.10)	22.28 (4.55)	2.475	.085	
OCK	25.34 (5.87)	26.9 (5.06)	26.03 (5.80)	4.120	.017	B>A
JS	7.01 (1.99)	7.02 (1.98)	6.62 (2.04)	2.193	.113	
ID	9.32 (2.88)	10.09 (3.01)	9.22 (3.04)	4.925	.008	B>A, B>C
INT	14.63 (4.61)	15.99 (4.93)	14.54 (4.95)	5.436	.005	B>A, B>C
OS	10.19 (4.12)	10.81 (4.13)	11.16 (4.39)	2.590	.076	
TI	6.83 (3.77)	7.01 (3.86)	7.59 (4.09)	1.791	.168	
OIS	5.30 (2.26)	5.90 (2.14)	5.02 (2.25)	7.332	.001	B>A, B>C

Note. [1] df = 2, 572. [2] The mean difference is significant at the .05 level. The tables utilize the following abbreviations: RC (Role Clarity), SI (Social Integration), TM (Task Mastery), OCK (Organizational Culture Knowledge), JS (Job Satisfaction), ID (Identification), INT (Internalization), OS (Occupational Stress), TI (Turnover Intentions), and OIS (Organizational Insider Status)

Although some differences between the groups were observed, they generally followed a similar pattern. New employees in the 'Lower Interaction' group scored higher in terms of Identification, Internalization, and Organizational Insider Status compared to those in the 'Higher Interaction' and 'Undetected Interaction' groups. Similarly, scores for Organizational Culture Knowledge were higher in the 'Lower Interaction' group than in the 'Undetected Interaction' group. It is also important to note that, while the ANOVA model for Role Clarity was significant, the Post Hoc test did not reveal any significant differences between the groups.

In order to ensure that the variables related to gamification, which could potentially influence socialization outcomes, were not mistakenly excluded from the subsequent analysis, Student's t-test was additionally performed with those variables where no intergroup differences were found among the three groups. The results showed that the 'Lower Interaction' group had higher scores in Role Clarity (M = 23.52, SD = 4.30 vs. M = 22.64, SD = 4.61; t(421) = -2.024, p = .044) and Social Integration (M = 25.41, SD = 5.33 vs. M = 24.18, SD = 5.64; t(421) = -2.308, p = .022) compared to the 'Undetected Interaction' group. Additionally, the 'Higher Interaction' group had lower scores in Task Mastery (M = 22.28, SD = 4.55 vs. M = 23.21, SD = 4.19; t(377) = -2.052, p = .041) and higher scores in Occupational Stress (M = 11.16,

SD = 4.39 vs. M = 10.19, SD = 4.12; $t(377) = -2.174$, $p = .030$) than the 'Undetected Interaction' group. Considering these results, it is also relevant to include these variables in further data analysis. Additionally, the results suggest that patterns of interaction with gamification elements do not vary significantly in relation to new employees' job satisfaction and their intention to leave the job.

3.3.3. Factors predicting newcomers' socialization outcomes

After identifying all univariate relationships among the socialization outcomes, the corresponding regression models were developed. The same coding system, as the one used in constructing the regression models for gameful experience dimensions, was applied to categorical variables. Additional categorical variables were required for some predictive models of socialization outcomes, encoded as follows: Education (0 for those without an academic degree, 1 for those with an academic degree) and Work Experience (0 for those with less than ten years of experience, 1 for those with more than ten years of experience). Given the number of socialization outcomes, further data analysis will be divided into two parts, thus separately presenting predictive factors for proximal and distal outcomes.

Table 18 shows the results of four regression models for proximal socialization outcomes (Role Clarity, Social Integration, Task Mastery, Organizational Culture Knowledge). Overall, the independent variables could explain between 18.5% and 53.2% of the variance in these socialization factors. Task Mastery had the least accurate predictability; thus, aspects related to this variable should be considered as limited in their explanatory power.

After assessing individual and organizational factors, it was discovered that Work-Related Resources (coefficient ß ranges from .157 to .565) and LMX (coefficient ß ranges from .120 to .161) could positively predict, to varying degrees, all proximal socialization outcomes. This suggests that possessing resources for work functions and maintaining high-quality relationships with supervisors predicts new employees' socialization positively. However, a different scenario emerged with Social Capital Resources. While this factor only predicts Role Clarity (ß = -.172) and Task Mastery (ß = -.157), a negative relationship was observed – an increase in social resources among new employees led to a decrease in their understanding of their work role and effectiveness in performing tasks. Finally, other organizational variables suggest that being involved in medium-sized work groups may slightly contribute to lower Role Clarity

scores (ß = -.075), and a longer tenure is associated with increased Task Mastery scores (ß = .094).

Table 18. *Final regression models of proximal socialization outcomes with individual, organizational, and gamification-related variables as predictors*

Dependent variable (Model results)	Group[*]	Independent variables	ß	t	p	VIF
Role Clarity (R^2 = .527, F = 126.970, df = 5 / 569, p <.001)	I/O	Work-Related Resources	.565	12.062	<.001	2.644
	I/O	Social Capital Resources	-.172	-3.970	<.001	2.265
	I/O	LMX	.120	3.370	.001	1.517
	I/O	Medium Workgroup	-.075	-2.584	.010	1.008
	GExp	Guidance	.266	6.684	<.001	1.901
Social Integration (R^2 = .379, F = 69.574, df = 5 / 569, p <.001)	I/O	Work-Related Resources	.157	3.635	<.001	1.698
	I/O	LMX	.131	3.189	.002	1.552
	GExp	Social Experience	.404	9.122	<.001	1.800
	GExp	Competition	-.124	-3.630	<.001	1.072
	GElm	Higher Interaction	.074	2.161	.031	1.067
Task Mastery (R^2 = .185, F = 16.064, df = 8 / 566, p <.001)	I/O	Work-Related Resources	.340	5.446	<.001	2.708
	I/O	LMX	.161	3.401	.001	1.553
	I/O	Social Capital Resources	-.157	-2.744	.006	2.267
	I/O	Job Tenure	.094	2.469	.014	1.008
	GExp	Guidance	.131	2.192	.029	2.494
	GExp	Immersion	-.103	-1.925	.055	1.980
	GExp	Competition	-.079	-1.878	.061	1.215
	GElm	Lower Interaction	-.104	-2.709	.007	1.021
Organizational Culture Knowledge (R^2 = .532, F = 107.596, df = 6 / 568, p <.001)	I/O	Work-Related Resources	.236	6.065	<.001	1.567
	I/O	LMX	.135	3.745	<.001	1.567
	I/O	Job-Specialization Match	.053	1.773	.077	1.073
	GExp	Accomplishment	.251	5.882	<.001	2.203
	GExp	Social Experience	.196	4.183	<.001	2.664
	GExp	Playfulness	.069	1.970	.049	1.504

Note. [*]Column abbreviations: I/O (Individual and organizational variables), GExp (Gameful experience), GElm (Gamification elements)

After evaluating the gamification-related factors, it was revealed that specific dimensions of gameful experience can contribute to the expression of proximal outcomes. Guidance positively predicted Role Clarity (ß = .266) and Task Mastery (ß = .131), while, in the same direction, Social Experience could predict Social Integration (ß = .404) and Organizational Culture Knowledge (ß = .196). The latter proximal outcome could also be predicted by Accomplishment (ß = .251) and, to a much lesser extent, Playfulness (ß = .069). The only gameful experience dimension which showed a negative direction was Competition (ß = -.124) – the perception of competition in the work environment was associated with a lower social acceptance of newcomers by their colleagues. Finally, it is important to highlight that the

new employees' interaction with gamification elements in the work environment was not straightforward. Belonging to a cluster where interaction with gamification elements was more frequent and intense could predict higher Social Integration scores (ß = .074). However, belonging to a cluster where this interaction was of a lower level was associated with lower Task Mastery (ß = -.104). It should be noted that these predictive features are relatively weak.

The subsequent part of the results covers the predictive assessment of the distal socialization outcomes (Job Satisfaction, Internalization, Identification, Occupational Stress, Turnover Intentions, and Organizational Insider Status). Table 19 presents the results of all regression models. From the provided information, it is evident that the independent variables could explain between 31.1% to 52.1% of the variance in distal outcomes, thus indicating good predictive properties of the regression models.

Based on the assessment of individual and organizational variables (the socialization context), it is again evident that Work-Related Resources play a key role in predicting the socialization outcomes, as it was a significant independent variable in all regression models (coefficient ß ranges from .108 to .190). Although the predictive relationship was positive in most cases, higher levels of Work-Related Resources were associated with lower levels of stress experienced by new employees (ß = -.144) and their lower intentions to leave the job (ß = -.121). Higher LMX also predicted a lower expression of the latter variables (coefficient ß ranges from -.122 to -.206). Still, it also predicted higher levels of Job Satisfaction (ß = .153) and Organizational Insider Status (ß = .110). Meanwhile, Social Capital Resources were only marginally positively associated with both organizational commitment variables – Identification (ß = .108) and Internalization (ß = .140). Considering other organizational variables, it can be stated that new employees working in roles matching their specialization have slightly greater scores of Job Satisfaction (ß = .141), Identification (ß = .078), and lower scores of Turnover Intentions (ß = -.157). The latter observation can also be applied to employees with over ten years of total work experience (ß = -.129). Additionally, the longer the employees work in the organization, the more likely they are to have higher Organizational Insider Status scores (ß = .170), but this also increases their stress scores slightly (ß = .071). Finally, when considering individual variables, it can be observed that they are more closely related to organizational commitment variables. Identification (ß = .092) and Internalization (ß = .094) scores tend to increase with the age of new employees. Additionally, higher Internalization scores can be slightly predicted by the possession of an academic degree (ß = .092).

Table 19. *Final regression models distal of socialization outcomes with individual, organizational, and gamification-related variables as predictors*

Dependent variable (Model results)	Group*	Independent variables	ß	t	p	VIF
Job Satisfaction (R^2 = .521, F = 88.166, df = 7 / 567, p <.001)	I/O	Work-Related Resources	.190	4.793	<.001	1.857
	I/O	Job-Specialization Match	.141	4.688	<.001	1.076
	I/O	LMX	.153	4.164	<.001	1.596
	GExp	Accomplishment	.182	4.031	<.001	2.413
	GExp	Social Experience	.169	3.476	<.001	2.814
	GExp	Playfulness	.092	2.478	.014	1.616
	GExp	Immersion	.082	1.997	.046	2.018
Identification (R^2 = .484, F = 66.348, df = 8 / 566, p <.001)	I/O	Work-Related Resources	.162	3.379	.001	2.515
	I/O	Age	.092	2.924	.004	1.075
	I/O	Job-Specialization Match	.078	2.424	.016	1.128
	I/O	Social Capital Resources	.108	2.285	.023	2.431
	GExp	Immersion	.160	3.751	<.001	2.002
	GExp	Social Experience	.170	3.400	.001	2.750
	GExp	Accomplishment	.141	3.000	.003	2.437
	GExp	Playfulness	.099	2.590	.010	1.605
Internalization (R^2 = .376, F = 48.776, df = 7 / 567, p <.001)	I/O	Age	.094	2.801	.005	1.028
	I/O	Education	.092	2.748	.006	1.016
	I/O	Social Capital Resources	.140	2.725	.007	2.391
	I/O	Work-Related Resources	.108	2.072	.039	2.464
	GExp	Immersion	.236	5.187	<.001	1.879
	GExp	Accomplishment	.128	2.479	.013	2.409
	GExp	Social Experience	.122	2.288	.022	2.565
Occupational Stress (R^2 = .311, F = 25.488, df = 10 / 564, p <.001)	I/O	LMX	-.206	-4.675	<.001	1.592
	I/O	Education	.118	3.334	.001	1.026
	I/O	Work-Related Resources	-.144	-2.978	.003	1.915
	I/O	Job Tenure	.071	2.033	.043	1.011
	I/O	Manager Status	.065	1.787	.074	1.079
	GExp	Challenge	.468	8.458	<.001	2.506
	GExp	Playfulness	-.172	-4.113	<.001	1.440
	GExp	Competition	.104	2.742	.006	1.179
	GExp	Accomplishment	-.182	-2.706	.007	3.705
	GExp	Guidance	-.123	-1.877	.061	3.489
Turnover Intentions (R^2 = .324, F = 38.850, df = 7 / 567, p <.001)	I/O	Job-Specialization Match	-.157	-4.356	<.001	1.086
	I/O	Work Experience	-.129	-3.667	<.001	1.035
	I/O	LMX	-.122	-2.802	.005	1.578
	I/O	Work-Related Resources	-.121	-2.571	.010	1.857
	GExp	Social Experience	-.167	-2.960	.003	2.658
	GExp	Accomplishment	-.126	-2.351	.019	2.421
	GExp	Immersion	-.079	-1.661	.097	1.887
Organizational Insider Status (R^2 = .362, F = 46.004, df = 7 / 567, p <.001)	I/O	Job Tenure	.170	5.048	<.001	1.003
	I/O	Work-Related Resources	.167	3.752	<.001	1.758
	I/O	LMX	.110	2.611	.009	1.570
	GExp	Social Experience	.213	4.025	<.001	2.490
	GExp	Immersion	.149	3.262	.001	1.826
	GExp	Playfulness	.074	1.754	.080	1.596
	GElm	Lower Interaction	-.098	-2.903	.004	1.016

Note. *Column abbreviations: I/O (Individual and organizational variables), GExp (Gameful experience), GElm (Gamification elements)

Considering gamification-related variables, the dimensions of Accomplishment, Social Experience, and Immersion stood out significantly. They were predictive of higher scores in Job Satisfaction, Identification, and Internalization (coefficient ß ranges from .082 to .236). Additionally, lower Occupational Stress (ß = -.182) and Turnover Intentions (ß = -.126) scores could be predicted by higher Accomplishment scores; a less frequent intention to quit one's job was also linked to higher Social Experience scores (ß = -.167). The latter variable, along with Immersion, was associated with higher Organizational Insider Status scores (coefficient ß ranges from .149 to .213). Considering other gameful experience dimensions, it can be stated that the more newcomers engage playfully in their work environment, the more they are likely to have, to varying degrees, higher scores of Job Satisfaction (ß = .092), Identification (ß = .099), and lower scores of Occupation Stress (ß = -.172). It is worth noting that newcomers' stress scores can be increased by perceiving their work environment as competitive (ß = .104) or challenging (ß = .468). Finally, it can be stated that interaction with gamification elements does not significantly relate to distal socialization outcomes. It was observed that less frequent and engaging interaction with these elements slightly contributes to lower scores of Organizational Insider Status (ß = -.098).

3.4. Relationships between Socialization Context, Gameful Experience in the Work Environment, and Socialization Outcomes: an Integral Model

After evaluating the factors demonstrating the strongest predictive qualities, the final model explaining newcomers' relationships between the socialization context (including gamification elements), the gameful experience in the work environment, and the socialization outcomes was constructed. The model adhered to the theoretical assumptions outlined in the introductory section. Those variables which had been found to be non-significant in previous regression analyses were excluded from the model's construction. The suitability of the model was assessed through path analysis. In total, the model comprised 30 variables, interconnected based on relationships identified during the regression analyses. Also, the model incorporated additional intra-covariates for ten socialization outcomes and seven gameful dimensions based on previously established correlational relationships (due to the complexity of the model, these are not depicted in the subsequent figures). The results of the final model were considered adequate: $\chi^2 = 667.658$, df = 271, p <.001; RMSEA = .050, TLI = .924, CFI = .953, SRMR = .052.

It is important to highlight that not all previously identified relationships remained significant. The following seven relationships (with the independent variable on the left and the dependent variable on the right) were not significant in the final model: Higher Interaction → Immersion, Higher Interaction → Social Integration, Lower Interaction → Task Mastery, Guidance → Task Mastery, Job Tenure → Task Mastery, Competition → Occupational Stress, Immersion → Job Satisfaction. Notably, in the overall context, the significance of interaction with gamification elements slightly diminished, and there were fewer variables explaining task mastery. The final model, demonstrating only significant relationships, is presented in Appendix 7. Given its visual complexity, the model will be broken down and further presented through several figures. These figures will illustrate the interrelationships between variable groups and link them to the established research model (Figures 5–9). However, of the 94 regression relationships in the model, most could be considered weak, with 69 having standardized regression weights below .20, indicating their overall low importance (complete statistics are presented in Appendix 8).

In the remaining portion of this chapter, the most important highlights of the model will be discussed. The analysis of proximal socialization outcomes (Figures 5–7) can be summarized as follows:

- The provision of work-related resources and clear guidance within the work environment, as well as a higher-quality relationship with the supervisor, can positively predict a newcomer's role clarity. Working in a medium-sized workgroup and receiving higher levels of social capital resources may negatively predict this aspect.
- The social integration of newcomers into the workgroup can be predicted by the higher levels of social connectedness perceived in the work environment, higher-quality relationships with the supervisor, and the provision of work-related resources. Conversely, competition in the workplace may negatively predict this aspect.
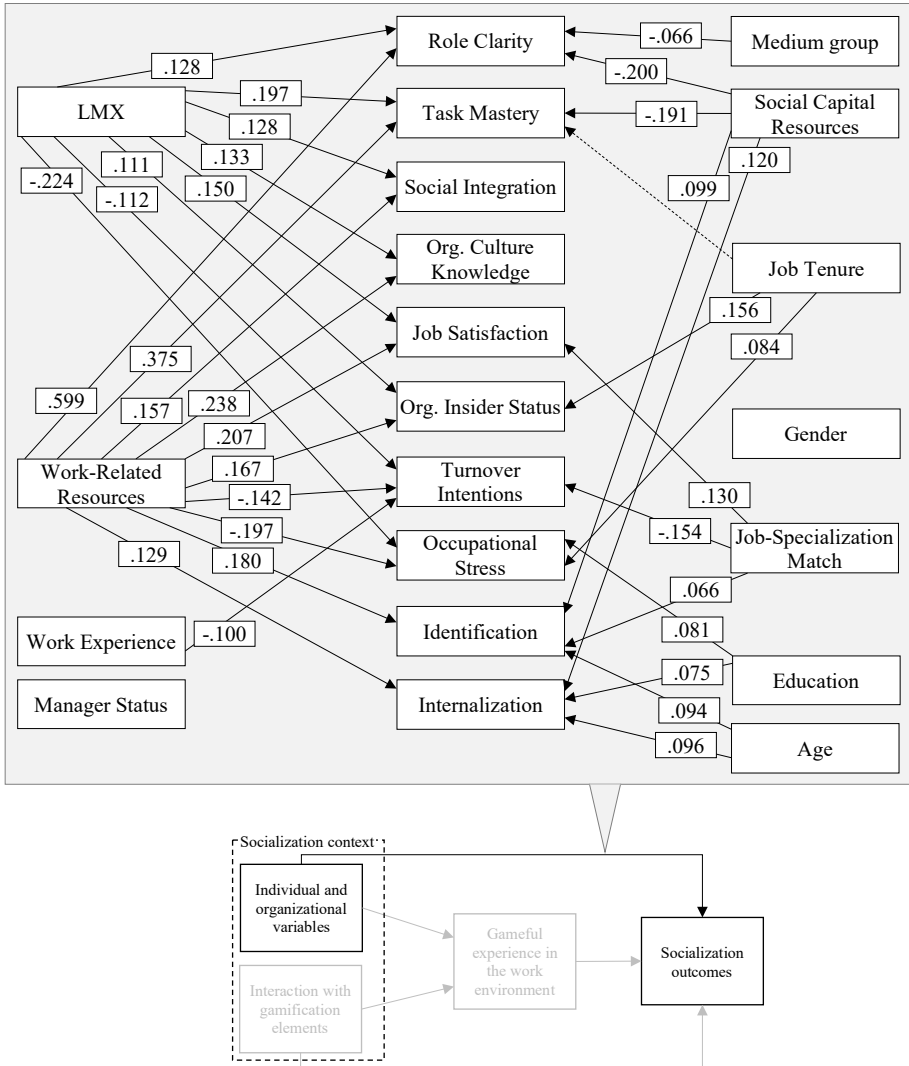
Figure 5. *Predictive properties of individual and organizational variables on socialization outcomes in the final model (the dotted lines indicate insignificant relationships)*

- Task mastery can be explained by a higher-quality relationship with the supervisor and by the provision of work-related resources. On the other hand, the provision of social capital resources predicts task mastery negatively.
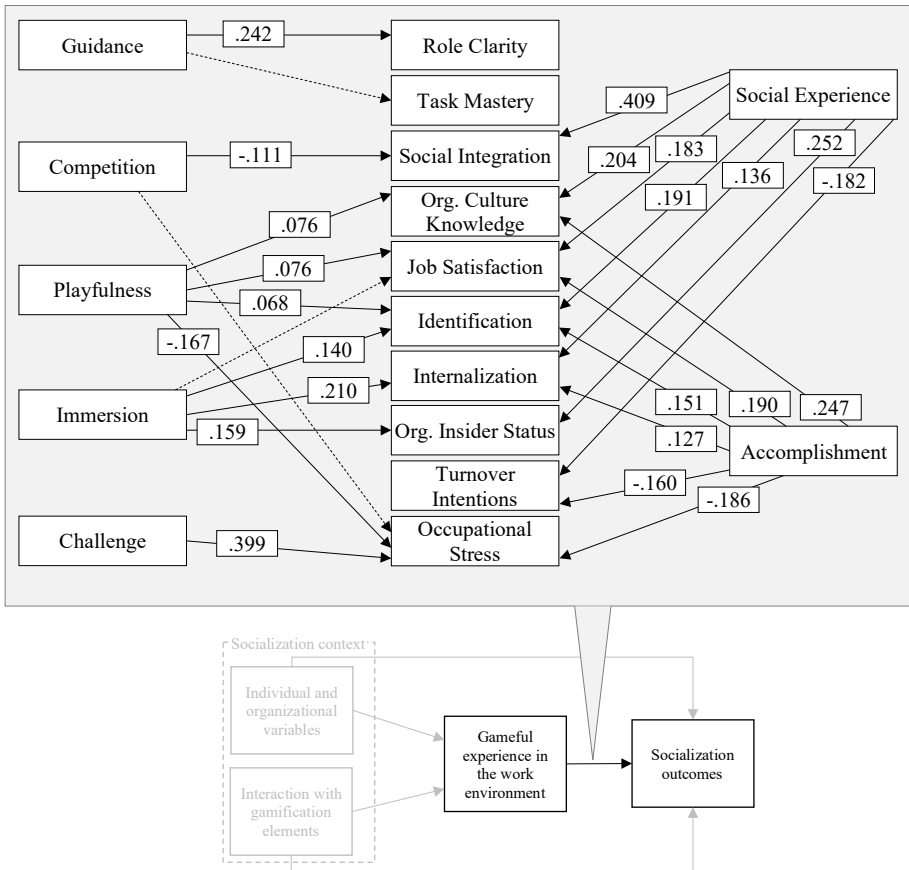
Figure 6. *Predictive properties of gameful experience in the work environment dimensions on socialization outcomes in the final model (the dotted lines indicate insignificant relationships)*

- Newcomers' knowledge of organizational culture can be predicted by the provision of work-related resources and by perceiving the working environment as socially connected, playful, and achievement-oriented, as well as by a higher-quality relationship with the supervisor.

The analysis of distal socialization outcomes (Figures 5–7) can be summarized as follows:

- Predictors such as a higher-quality relationship with the supervisor, greater overall work experience, provision of work-related resources, perceiving the work environment as socially connected or achievement-oriented, and the employee's job alignment with their

specialization were associated with the newcomer's lower intention to leave one's job.
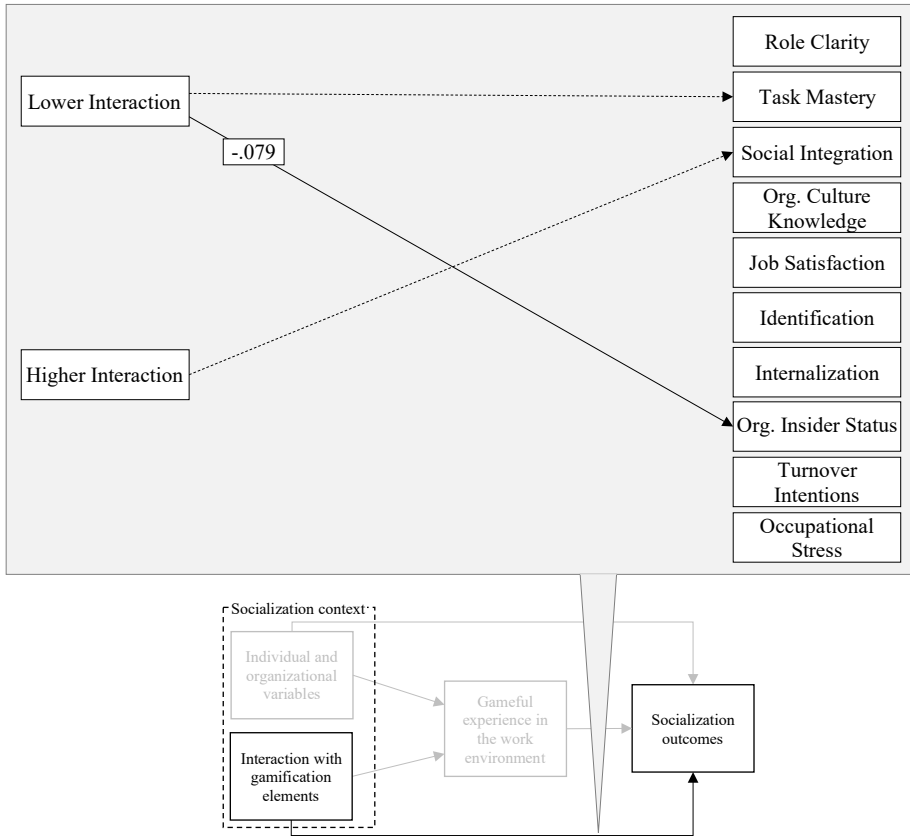
Figure 7. *Predictive properties of interaction with gamification elements on socialization outcomes in the final model (the dotted lines indicate insignificant relationships)*

- An immersive, socially connected, and achievement-oriented environment, as well as the provision of socialization resources and older age, predict both organizational commitment dimensions. Separate patterns showed that the adoption of the organization's values and goals by new employees (internalization) is higher among those with an academic degree. Additionally, newcomers' sense of pride and belonging to the organization (identification) can be

predicted by perceiving the work environment as more playful or the job alignment with specialization.

- New employees' satisfaction with their jobs is mostly dependent on the amount of work-related resources they receive. Additionally, factors like higher-quality relationships with supervisors, the job's alignment with their specialization, and the presence of playfulness, social connectedness, or encouragement for higher achievements in the work environment can also predict newcomers' job satisfaction.
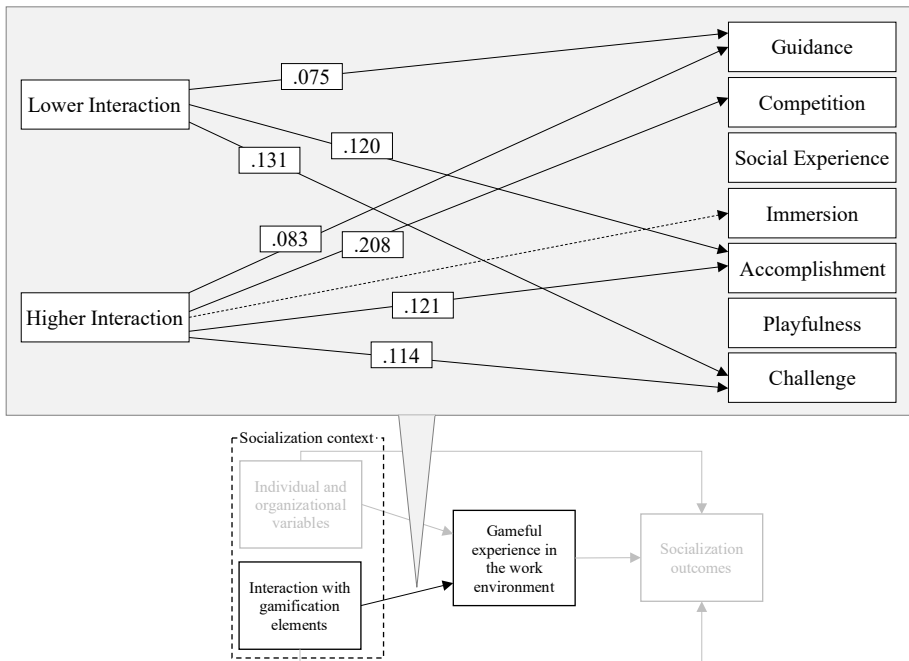
Figure 8. *Predictive properties of the interaction with gamification elements on gameful experience in the work environment dimensions in the final model (the dotted lines indicate insignificant relationships)*

- The stress experienced by new employees was predicted best of all by the work environment, which was perceived as challenging. However, higher-quality relationships with supervisors can reduce stress. Consequently, provision of work-related resources and an achievement-focused and playful work environment were predictors of lower stress levels. It is also important to note that stress levels were slightly higher among employees with academic degrees and tended to increase with the longer tenure in the organization.

- There were many minor predictors contributing to newcomers' perception of an organizational insider, such as longer job tenure, provision of work-related resources, higher-quality relationships with supervisors, and an immersive and socially connected work environment. It is also important to highlight that less participation in the organization's gamification activities predicted that new employees would feel more like outsiders.
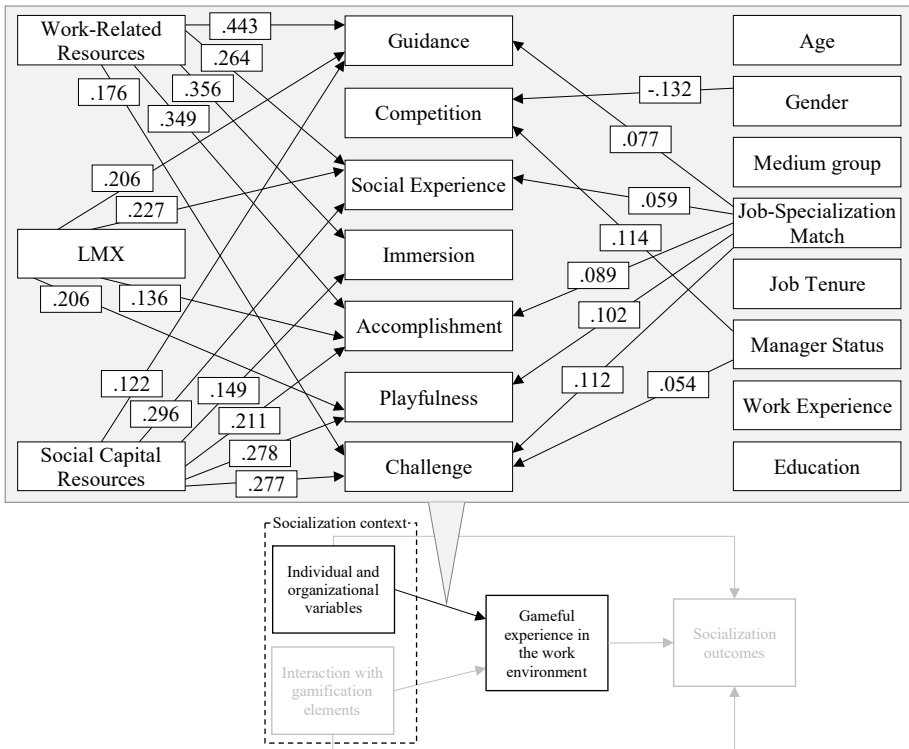
Figure 9. *Predictive properties of individual and organizational variables on gameful experience in the work environment dimensions in the final model*

As a final point, it is important to mention factors explaining the distribution of gameful experience dimensions (Figures 8–9). Socialization resources, higher quality relationships with supervisors, and job alignment with specialization predict a major range of these aspects. This is not particularly true for perceiving one's environment as competitive, as it was mostly predicted by the gender and the job position type. In contrast to the socialization outcomes, the interaction with gamification elements has a more

significant role concerning the gameful experience dimensions. This interaction (especially when it is more intense) is connected to the perception of the work environment as achievement-oriented and directional, but also as creating challenges and competition.

4. DISCUSSION

This study aimed to examine the importance of gamification to the relationship between the socialization context and its outcomes. Previous research has primarily concentrated on the onboarding experiences of newcomers in relation to gamification. Given that this study regarded organizational socialization as a broad phenomenon, not equating it to onboarding processes, it encompassed an analysis of both proximal and distal socialization outcomes. Additionally, gamification was assessed not only in terms of interaction with its structural elements, but also considering the potential psychological consequences it might induce.

In the following sections, the key findings of the study will be discussed in more detail. Before presenting them, it is important to highlight that this study was correlational in nature, so the insights provided should be viewed not as absolute certainties, but rather as potential trends.

4.1. Newcomers' Experiences with Gamification

The discussion of results begins with an analysis of how new employees interact with gamification in the workplace. Prior studies (e.g., Raftopoulos et al., 2015) have not shown exhaustive findings on the prevalence of gamification. However, this study's random sample indicates that more than half of the respondents across different fields report encountering gamification elements. This suggests a moderate level of prevalence of this phenomenon, thus supporting the need for its comprehensive research in various workplace processes, including newcomers' socialization.

It is noteworthy that encounters with gamification vary in qualitative aspects. The results showed that new employees interact with gamification elements differently – it was possible to distinguish two groups. In one group, there was more frequent and active engagement with a relatively larger quantity of gamification elements, while, in the other, these parameters were lower. This study also considers that some participants might not have encountered gamification elements, but this assertion requires cautious interpretation, as specific elements of gamification might not have been included in the study. However, given that this research focused on popular and recognizable elements, it is likely that the incidence of those new employees encountering gamification is minimal.

Nevertheless, the inclusion of this third group, where no interaction with gamification was detected, partially validated the construct of the gameful experience in the work environment. In the group where such interactions

were less intensive, all parameters of the gameful experience were always higher than in the group with no such interaction. The gameful experience in the work environment, related to various contextual factors, seems inseparable from gamification elements. This finding aligns with the theoretical assumptions of other authors (e.g., Hamari et al., 2014; Landers et al., 2019; Högberg et al., 2019).

It is important to emphasize that the aforementioned assumption is only accurate to a certain extent, as the subjects in the higher interaction with the gamification elements group were characterized only by a greater perception of competition, challenge, and accomplishment in the work environment than the undetected interaction group. Thus, this does not encompass the entire spectrum of the gameful experience dimensions. Such results yield several insights. To begin with, they do not entirely align with the theoretical considerations of Landers and others (2019), who propose that the more gamified a system is, the more game-like experiences it should induce. In this study, this was only partially confirmed. The findings suggest a more nuanced understanding, leaning towards the idea that 'less is more' in gamification. Nah and others (2019) stated that gamification elements serve multiple purposes – which means that the same elements can be directed toward different goals. The results of this study did not show any variances between the interaction groups, which, under different circumstances, would indicate that some elements are more prominent than others. This suggests a diminishing effect: as the variety of gamification elements increases, so does the diversity in their application and potential outcomes, leading to a wider spread of these effects. It is unlikely that all aspects of the gameful experience will be felt equally or intensely. For instance, it appears improbable that an employee would simultaneously experience intense competition with colleagues and a profound sense of connectedness and belonging within the workgroup. Additionally, this assumption aligns well with Marczewski's (2015) ideas suggesting that engagement in gamified activities varies according to individual motivation. Regardless of the broad spectrum of outcomes that gamification can offer, people choose to participate for one primary reason that matters most to them, such as a desire to compete, collect achievements, or interact with others. Consequently, the appeal of gamification would not be solely dependent on the variety or intensity of its elements but rather on how well these elements resonate, in the study's context, with the employees' preferences.

This notion leads to the necessity of discussing the content of gamification more thoroughly. When analyzing the prognostic characteristics of interaction with gamification elements in the overall context of

socialization, it becomes evident that, regardless of how intensive an interaction with gamification is, it can only be indicative of three dimensions of the gameful experience – accomplishment, challenge, and guidance. In addition, higher interaction predicted newcomers' experience of competition. It is notable that higher interaction, when assessed independently, may predict both social experience and immersion parameters. In path analysis, however, these relationships were overshadowed by other variables, thereby rendering them insignificant. After examining the gamification elements that new employees most commonly encounter, it is evident that the majority are explicitly aimed at eliciting the mentioned experiences. Employees came into contact with progress bars, badges, and contests, which, according to Nah and others (2019), are used to encourage challenges, goal orientation, and achievement, as well as competition within organizations. A more focused content analysis could yield insights into the effectiveness of a targeted approach in gamification. This analysis might reveal whether a combination of gamification elements, each aimed at specific purposes, influences employee experiences more effectively than a large, varied assortment of such elements.

However, it should be noted that employees in this study most commonly interacted with guilds (clans, chat channels). These gamification elements are primarily directed toward the goal of increasing social connectivity or socialization (e.g., Tondello et al., 2017; Nah et al., 2019). It could be argued that such widespread usage of the guild should significantly relate to the social experience of newcomers, but, surprisingly, this was not confirmed in this study. The collective impact of other elements might reduce the importance of this particular gamification element. Additionally, other factors may contribute to this effect. In their research on gameful experience in gamified services, Högberg and others (2019) observed that the mere presence of other people could foster social interactions, such as feeling accountable for goals. Participants in their study received encouragement and support from friends, sometimes through integrated social media features. The authors concluded that these services could facilitate social experiences without the presence of actual people. However, since newcomers typically interact with their colleagues daily (remote work is not considered here, as it was not related to other variables of the study), it is plausible that in-person interactions in the workplace may overshadow the social aspects promoted by gamification elements. Support for this comes from the finding that social experience was primarily predicted by abundant socialization resources and positive relationships with supervisors. This is logical, considering that social capital resources enhance socialization opportunities (Saks & Gruman, 2012), and

LMX is linked to the distribution of these resources (Graen & Uhl-bien, 1995). In this context, it could be reasonable to assume that if newcomers at work have limited opportunities for social interaction, perhaps gamification elements could better compensate for their experienced social connectedness. However, additional research is needed to substantiate this assumption.

It was also observed that interaction with gamification elements in the overall socialization context was not associated with perceiving the work environment as playful or immersive. This observation might be attributed to the possibility that the combined content of particular elements was more closely related to other experiences, but alternative explanations are also worth exploring. For instance, gamification might not increase immersion in the work environment if it is already sufficiently immersive. Gregg (2011) demonstrates in her ethnographic study how modern human resource management practices have transformed the work environment. She points out that work is no longer limited to a physical location. Despite the spatial boundaries being dissolved by digital connectivity, the nature of work has become increasingly immersive. The immersion in work now extends into personal spaces and times, reinforced by the need for constant connectivity via digital platforms. The work environment has become a mix of human interactions, design, corporate culture, and technology, merging work and personal life smoothly. As for playfulness in the work environment, the lack of importance of gamification elements can be explained by the nature of this phenomenon itself. As outlined by Stenros (2014), playfulness can be described as a personal trait. The author suggests that it is more about an individual's mood, attitude, or spontaneous force rather than something that can be externally imposed or triggered. This viewpoint suggests that the perception of a playful work environment is likely a reflection of intrinsic personal characteristics rather than a direct consequence of interacting with gamification elements.

This discussion proposes that organizational variables relate to newcomers' gameful experiences to a greater extent than gamification elements. The findings indicate that high-quality relationships with a supervisor and the available socialization resources are closely associated with most dimensions of a gameful experience, except for competition. This observation partially aligns with the inherent characteristics of these experiences. For example, not only gamification elements like progress bars can provide directional clarity, but a supervisor offering direct feedback can do that as well. The alignment between the job and the individual's specialization also plays a role in shaping the dimensions of gameful experiences, excluding competition. As Adkins (1995) suggested, more

experienced newcomers might join a new organization with greater confidence due to their knowledge of the work field. This confidence could lead them to communicating more with colleagues in the work environment and pursuing achievements, taking risks by engaging in various challenges.

It was observed that newcomers' higher interaction with gamification elements predicted perceived competition in the work environment, but neither the socialization resources nor the quality of the relationship with a supervisor were predictors of this aspect. The results indicate that males and individuals with subordinates in their roles experience competitive rivalry more frequently. Vidyarthi and others (2010) suggested that employees might compete for a leader's favor, which, in turn, could make the leader perceive the work environment as more competitive. A study by Tondello and others (2017) could be relevant to gender differences. The authors found that men prefer gamification elements related to socialization. Their study categorized elements such as social comparison, social pressure, social status, and social competition under this category. Thus, it may be argued that males demonstrate a preference for social competitiveness, as reflected in the findings of this thesis.

4.2. Gamification and Proximal Socialization Outcomes

The discussion of the results is continued by examining how gamification-related variables predict the newcomers' proximal socialization outcomes – role clarity, social integration, task mastery, and organizational culture knowledge – in the overall socialization context. The focus will primarily be on analyzing the relationships between gameful experience and the latter parameters rather than the interaction with gamification elements. In the broader context of socialization, such interaction was not directly linked to any proximal socialization outcome. This indicates that gamification components in the work environment do not independently play a significant role in newcomers' socialization. Their importance, if any, might manifest through gameful experiences (Landers et al., 2019; Högberg et al., 2019) as opposed to playing a direct role. Considering that many studies related to gamification elements in the workplace (especially experimental ones) examine their effects in isolation, incorporating a broader context significantly reduces the direct role they have.

To begin with, the only gameful experience that could predict role clarity was guidance. That is, when considering the overall socialization context, new employees had a clearer understanding of their role and purpose in the organization when they experienced sufficient directional clarity. It is

important to note that an inherent feature of gamification elements is immediate feedback (Nah et al., 2019). In the context of information provision, gamification makes performance evaluation visible, comparable, and quick (Cardador et al., 2017). Thus, it becomes easier for employees to receive feedback on their performance; they can also see how their work differs from their colleagues and whether any adjustments are needed. The provided input helps new employees refine their work roles. The results of this study showed that any type of interaction with gamification elements directly predicts the perceived guidance. While this study did not explore mediating relationships, it is plausible to suggest that gamification elements influence new employees' role clarity primarily via this gameful experience. The relationship with the supervisor and the acquisition of socialization resources also predicts guidance. Notably, new employees in medium-sized workgroups who received more social capital resources experienced lower role clarity. Bravo and others (2003) emphasize that different colleagues can provide inconsistent and conflicting information to a new employee. In such cases, the resulting ambiguity can lead to role conflict for the newcomer. Therefore, in the context of gamification, it could be assumed that the feedback provided by its elements should align with feedback from supervisors or colleagues, as only in such cases can role clarity be achieved.

During this research, only one study was found that examined the relationship between gamification and role clarity. Girdauskienė and others (2022) assessed role clarity as one of the antecedents of work engagement in a sample of long-term employees. The results of their study indicated that gamification had one of the least significant impacts on employees' perceived role clarity. Given the study's focus on more experienced organization members, it is likely that gamification had a minimal contribution to early job role learning. Another point is that the authors did not evaluate the initial level of role clarity, which could have been relatively high. Furthermore, the authors' approach to gamification was abstract, inquiring about how much the organization's gamification techniques affected role clarity. Although the study results dissected gamification into its constituent elements, it also showed that direct interaction with gamification elements was less significant. However, it did reveal a potential pathway through which the interaction between gamification and role clarity is expressed.

The results of this study also showed that perceived social experience and competition within the work environment could predict social integration. The first result is quite intuitive – the perceived interpersonal connectedness and the sense of belonging in a professional setting determine the extent to which a newcomer feels integrated into the group. However, interaction with

gamification elements was not directly connected to newcomers' perception of the social nature of their work environment. Therefore, this dimension was likely predicted by other factors, such as, according to the study results, a higher-quality relationship with a supervisor or work-related resources. Although it has already been mentioned that real-life communication is likely more important than gamification elements in creating the above-mentioned social experience, there is another point that needs to be considered – social integration was also not determined by social capital resources. However, the latter was linked to social experience. This suggests that encouraging communication opportunities (whether through resources or gamification) does not always translate into better assimilation into the workgroup. Thus, for an organization aiming to use gamification for quicker newcomer integration, achieving this without perceived interpersonal connectedness in the work environment is challenging. Ellis and others (2015a) suggested that better social integration is advantageous due to an easier access to vital information. Based on this and the obtained results, one could argue the opposite. Let us suppose that an individual does not feel a strong sense of connectedness in the work environment. In that case, communication via gamification and social capital resources remains more of an instrumental nature and does not build profound work relationships. Of course, this assumption requires further investigation.

As for competition, perceived rivalry in the work environment can hinder the integration of new employees into the team. It is likely that competition, regardless of its source, negatively affects teamwork. For example, in teams with high internal competition, new employees may offer fewer ideas, due to being perceived as external threats by other members (Rink et al., 2013), which signifies insufficient social integration. This is further emphasized by Algashami and others (2019), who state that applying competitive elements such as leaderboards may lead to clustering among team members. Considering that this study's results indicate that gamification elements can predict perceived competition in the work environment, thereby negatively relating to social integration, careful consideration about their implementation is needed. Organizations should closely assess the content of gamification elements and their consequent outcomes, as they may contribute negatively to a socialization process.

None of the variables related to gamification were determinants of a newcomer's task mastery in the overall socialization context. This self-assessment of one's ability to effectively carry out job responsibilities was linked solely to socialization resources and a higher-quality relationship with a supervisor. Although interaction with gamification and experienced

guidance had a predictive value for task mastery in isolation, their importance diminished in the broader work context. As Kammeyer-Mueller and Wanberg (2003) pointed out, task mastery is more closely related to the work domain than the organizational domain, suggesting that proficiency in job-specific tasks is more directly linked to job-related aspects and challenges rather than the work environment. Landers and Marin (2021) noted that gamification could serve as a tool in the current job design frameworks to introduce motivating factors into the work environment, potentially enhancing employee efficiency. However, it appears that the gamification strategies employed by participants' organizations may not have been sufficient or appropriately adapted to significantly alter the job design in a way that would noticeably affect the newcomers' task mastery.

Finally, new employees' comprehension of the corporate culture was determined by accomplishment, playfulness, and social experience dimensions. According to Högberg and others (2019), the drive to progress and continuously improve is often linked to bringing tasks or goals to completion. It is reasonable to assume that when employees feel a sense of accomplishment, it is because they have successfully completed tasks or made significant contributions to their organization. This success usually requires an in-depth understanding of the organization's procedures, objectives, and core values. Thus, as employees do their jobs well, they naturally learn more about the company's culture. This better understanding could be strengthened by their perceived need to achieve more in the job, which makes their knowledge of the organization's culture even better. To rephrase this, small wins inspire one to learn the rules of the game better for future victories.

The social experience dimension has been previously mentioned as a significant factor in determining social integration. This integration, in turn, is often regarded as a key factor in accessing vital information (Ellis et al., 2015a). It is likely that as employees engage in more profound communication with their colleagues, they have increased opportunities to learn about the organizational culture. Participants in Högberg and others' study (2019) stated that spontaneity and exploration are a part of the playful experience. Therefore, it can be presumed that when employees perceive their work environment as playful, they may be more likely to talk, gather, and tell stories, which helps them learn about the organizational culture.

Certainly, the latter are only theoretical assumptions, as there have been no studies examining the relationship between gamification-related variables and the last proximal outcome – organizational culture knowledge. Khodabandelou and others (2023) have suggested that gamification can broadly enhance organizational learning. The current study supports this idea

by indicating that, along with good relationships with managers and access to work-related resources, gamification can aid in learning more about cultural aspects. This is especially true for perceiving the work environment as accomplishment-oriented, which could be indicative of gamification.

4.3. Gamification and Distal Socialization Outcomes

The discussion of the results is concluded by examining the connections between gamification and distal socialization outcomes – job satisfaction, organizational commitment, turnover intentions, occupational stress, and organizational insider status – in the overall socialization context. Again, it appears that interaction with gamification elements had a minor role in determining these outcomes. However, unlike with proximal outcomes, there is a richer body of scientific literature exploring similar connections. This provides an opportunity to compare the results of this study with those of others in the field.

To begin with, newcomers' interaction with gamification elements did not determine their job satisfaction. However, three gameful experience dimensions – accomplishment, social experience, and playfulness – along with a higher-quality relationship with a supervisor, provision of work-related resources, and a position aligned with one's specialization were related to this variable. As Oprescu and others (2014) state, the long-term goal of a gamified workplace is to increase well-being at both the organizational level (i.e., productivity) and the personal level (i.e., job satisfaction). Nevertheless, the relationship between job satisfaction and gamification remains unclear. In a longitudinal study by Silic and others (2020), participants used a gamified human resource management system with integrated challenges, leaderboards, recognition, and awards for 12 months. The results showed that those employees who perceived this system as enjoyable and beneficial were also more satisfied with their jobs overall. Similar findings were observed by Hamza and Tóvölgyi (2022), who divided their study group into those exposed to gamification at work and those not exposed to it. It was revealed that the former group had higher job satisfaction scores. Contrasting results were found by Hammedi and others (2021): their study of retail workers revealed that gamified work decreased their job satisfaction. Notably, these studies did not focus on new employees, and their diverse methodologies in evaluating gamification make direct comparisons difficult.

Unlike the studies mentioned earlier, this research did not find a direct link between gamification elements and newcomers' job satisfaction in the overall socialization context. It may be hypothesized that job satisfaction

solidifies over the course of newcomers' employment. For instance, Boswell and others (2009) found evidence that newcomers' job satisfaction stabilized at twelve months. Therefore, gamification elements might initially influence it indirectly through the gameful experience dimensions. This is particularly true in the context of perceiving the work environment as encouraging the pursuit of further achievements, which is linked to interaction with gamification elements. As Locke (1976) pointed out, job satisfaction has two components: the cognitive component, related to thoughts and beliefs about one's job (for example, beliefs about the job's challenges or autonomy), and the emotional component, connected to feelings such as excitement and happiness. Nah and others (2019) suggest that gamification can target the need for achievements by motivating users with meaningful goals and providing a sense of accomplishment, often amplified by rewards or recognitions. This dynamic could potentially show how a new employee might derive job satisfaction from gamification. As for the other dimensions of gameful experience, although gamification elements in this study do not determine playfulness and social experience in the work environment, perceiving playfulness in one's surroundings can be related to Locke's (1976) emotional component of job satisfaction. Moreover, as Taormina (1997) stated, co-worker support is one of the factors affecting a newcomer's job satisfaction, which may be reflected in the results of this study.

It can also be concluded that direct interaction with gamification elements does not necessarily determine the components of organizational commitment – identification and internalization. To date, only one experimental study by Hussain and others (2018) has demonstrated a positive increase in employees' work commitment due to gamification. The use of different samples and methodological approaches in this study limits direct comparison with the latter study. It is noteworthy that the authors did not detail their findings; instead, they hypothesized that the enjoyment of gamification leads to an increased organizational commitment.

Nevertheless, in this study, both parameters of organizational commitment were linked to perceptions of the work environment as immersive, focused on accomplishment, and socially connected, alongside certain individual variables and socialization resources, with identification additionally affected by perceiving the environment as playful. The latter relationship might be explained by the enjoyable feelings associated with a playful work environment, as hypothesized by Hussain and others (2018). Moreover, perceived social connectedness indicates how effectively newcomers integrate into the workgroup. Therefore, establishing connections with peers and feeling a sense of belonging with them can increase attachment

to the organization (Bauer et al., 2007). Regarding other dimensions of gameful experience, how accomplishment and immersion are connected to organizational commitment remains unclear. However, Gregg (2011) argues that an immersive work environment may blur the boundaries between work and personal life. Moreover, accomplishments fulfill needs and help achieve meaningful goals (Nah et al., 2019). These factors might lead new employees to seek not only identification with the organization, but also a firmer alignment with its values. Nevertheless, these assumptions would require further research.

In the overall socialization context, it appears that interaction with gamification elements does not significantly relate to newcomers' intentions to leave their jobs. Instead, these intentions are mitigated by factors like higher quality relationships with a supervisor, provision of work-related resources, specific individual variables, and perceived social experiences in the work environment. Previous discussions have highlighted how the latter factor contributes to social integration. Effective assimilation into a workgroup, as noted by Bauer and others (2007), reduces the likelihood of newcomers wanting to leave. According to the results of this study, lower turnover intentions are also related to an achievement-oriented work environment. Interaction with gamification elements might play a role in this, as it allows newcomers to fulfill their psychological needs, such as through rewards or recognition, thus creating a foundation for them to stay. This dynamic could explain how gamification affects this aspect of socialization. Hussain and others (2018) found in their experimental study that participants who engaged in non-gamified tasks showed a decline in retention rates, whereas those involved in gamified tasks maintained their retention rates. Their study indicated that a monotonous, unengaging, and routine work environment might drive employees to seek new opportunities. This study extends these findings by suggesting that non-gamified tasks, which often lack meaningful goals, may contribute to decreased retention.

In scientific literature, the relationship between occupational stress and gamification is not clearly defined. Gamification may intensify stress among employees (Hammedi, 2021), yet it also has the potential to alleviate it (Hussain et al., 2018). This study suggests that work-related resources and a higher quality relationship with a supervisor are associated with lower stress levels in new employees. Additionally, a work environment perceived as playful or achievement-oriented also contributes to stress reduction. The results support the idea that engaging in imaginative and spontaneous behavior, driven by personal motivation in a professional setting, can reduce stress. This aligns with the views of other researchers. For example, Hussain

and others (2018) posit that gamification is positively linked to the employee mental health, while suggesting that a playful work atmosphere leads to lower stress levels. Achieving explicit and recognized goals may boost employees' self-efficacy, which is associated with task mastery (Bauer & Erdogan, 2012). Consequently, Frögéli and others (2022) found that an increased task mastery in newcomers correlates with reduced stress levels. In contrast to stress-reducing factors, aspects like a newcomer's education and longer tenure in a job may increase stress levels. Additionally, perceiving the work environment as challenging contributes to heightened stress levels. This perception likely turns the environment into a job demand, and prolonged exposure to such demands can evolve into stressors (Bakker & Demeroutti, 2007). Interaction with gamification elements can predict both accomplishment and challenge dimensions. Yet, these two aspects lead to different stress outcomes. This highlights the significance of the gamification content. The importance of gamification on an individual's stress level likely depends on the nature of the gamification and the newcomer's perception of it.

Lastly, the study's findings on the organizational insider status revealed distinctive results. Lower interaction with gamification elements was associated with a decreased sense of being an organizational insider. This indicates that individuals interacting less frequently and with lower engagement with gamification elements may feel more like outsiders. While explaining this result is complex, analyzing the trends in gameful experience dimensions may provide some insights. It was previously observed that whenever gamification elements were linked to socialization outcomes, there was also a significant association with at least one dimension of gameful experience on these outcomes. Since no gameful experience that is related to interaction with gamification elements determines the organizational insider status, this may indicate inadequate socialization. It might be argued that gamification itself is an approach or a strategy implemented by the organization. If newcomers feel like outsiders, they will likely engage less often or with less intensity in any organizational activities, including gamification. This may create a cyclical issue where feeling like an outsider leads to less engagement, thus further reinforcing the outsider perception. However, these results need more investigation.

Nevertheless, the perception of being a true member of an organization may be connected to an immersive and socially connected work environment. These results seem intuitive; as previously argued, these dimensions are related to better integration into the workgroup or attachment to the organization, which may be important for feeling like an insider. Likewise, having a good relationship with a supervisor, receiving work-related resources, or having a longer tenure at an organization also contributes to this perception.

4.4. Limitations and Future Research

This study used a cross-sectional design. Given its inherent limitations and that it records a single time point (Setia, 2023), the findings should be considered indicative of trends rather than specific causal links. Additionally, they cannot account for potential changes in the socialization or gamification dynamics over time. For example, it is unclear how long it takes for distal and proximal socialization outcomes to develop precisely (Ellis et al., 2015a), and the importance of gamification may reduce with time, presumably due to the novelty effect wearing off (Koivisto & Hamari, 2014). These questions may be better addressed in the future by using a longitudinal research design that builds on the findings of this study by investigating if the links found between socialization and gamification change over time.

Also, this study included a diverse set of participants from various organizations and job domains. Alternatively, a comparable investigation could be carried out in a more targeted manner, such as concentrating on a particular domain of work (where gamification might be more widespread), or even within a singular institution.

Furthermore, in order to control numerous variables, the research scope was reduced, excluding personal characteristics, pre-socialization aspects, or behavioral parameters (such as actual job turnover or job performance). It is also unclear if the research findings could be replicated by using the traditional socialization study criteria, for instance, socialization tactics (Van Maanen & Schein, 1979), because the organization's effort in this study was mostly limited to socialization resources. In terms of gamification, it is thought that personal preferences may influence how one decides to engage in gamification (e.g., Marczewski, 2015; Tondello et al., 2017), which was not controlled for in this research. Hence, by further examining the relationship between organizational socialization and gamification, future research may expand the scope of the related variables.

Lastly, when considering the assessment of gamification, some methodological improvements might be addressed. To begin with, such assessment in this study was undertaken on a subjective basis, with employees evaluating the gamification components they encountered at work. Because subjective self-evaluation can lead to inaccuracies, supplementary criteria should be applied to the assessment of interaction with gamification, such as tracking what is actually being implemented inside the organization. Another consideration is that the methodology was limited to a small number of gamification elements, although there is a possibility that the organizations may use more of them. Future research could seek to reproduce the obtained

results by incorporating other potential (possibly less recognized) elements. Finally, this study considered how newcomers interact with gamification elements on average. Nonetheless, the distinct effects of each of these elements were not taken into account. Hence, it may prove beneficial to evaluate the relationship between singular gamification elements and newcomers' socialization in subsequent research.

4.5. Practical Recommendations

This section offers practical recommendations for organizations (i.e., managers and human resource management specialists) based on the results of the study. While the research findings allow for a wider variety of practical implications, the focus primarily will be on the use of gamification for newcomers and their socialization process. It is worth noting that there are only minor relationships between gamification and socialization outcomes. Therefore, the proposed suggestions should be understood as requiring gamification elements to elicit specific experiences that directly contribute to employee socialization:

1. The application of gamification needs to be purposeful and grounded in continuous monitoring. According to the findings of the study, gamification elements are related to how newcomers perceive their work environment. This view varies to some extent in terms of both positive and negative consequences. Hence, the implementation of gamification should be deliberate, as it should elicit experiences associated with positive socialization outcomes. Because the same gamification elements might yield different experiences, the principle of observation also comes into play here. Leaderboards, for example, might provide a new employee with clarity on how their job outcomes compare to their colleagues, but they can also drive competitiveness, especially if awards are given for high rankings. Therefore, managers and human resource professionals should examine whether gamification provides the desired effect, whether this effect decreases with time, and whether it results in adverse effects;

2. Gamification elements can help new employees comprehend their direction within the workplace. With this perceived notion, new hires are better able to understand their job roles and the duties, responsibilities, areas of accountability, and priorities of their work. However, it is critical to ensure that the feedback from gamification is consistent with that from other sources, such as managers and coworkers. Inconsistencies might lead to role conflicts. For example,

if the progress bars indicate that a newcomer has almost completed all of the prescribed training material, but the manager implies that the employee still has a lot to learn, there is a mismatch between the two sources of feedback;

3. The experience of workplace competition is not favorable for new employees; it tends to impede their integration into the team. If there are already gamification aspects that potentially foster rivalry in the workplace (for example, points are rewarded for successfully completed work and are made public), it is best not to include new employees in activities linked to them;

4. The strategic focus should be placed on gamification elements that foster a sense of accomplishment among new employees, with the aim of enhancing their long-term commitment to the organization. It is most effective to implement this once the newcomer has become familiar with their new position. For example, if an employee is given the opportunity to earn a trophy or a badge, and this achievement is made public, it might add to their willingness to more deeply connect with the organization for which they work. Furthermore, gamified activities of this nature will, in the short term, facilitate a new employee's understanding of the prevalent organizational culture;

5. A challenging work environment increases the stress level of new employees. The inclusion of gamification elements also contributes to such perception of the work environment. Therefore, introducing new hires to challenges requires thoughtful consideration. For example, at a team or organizational level, an open challenge may be issued to encourage more recycling activities among personnel; this would entail regular tracking of the progress and, eventually, presenting the results. If a newly hired staff member perceives this challenge as part of their job demands, it could contribute to increased stress over time;

6. According to the findings of the study, new hires who have less involvement with gamification elements tend to feel more like outsiders. If there is a significant lack of interest in any gamified activity, this could be an indication of a new employee's unsuccessful integration. This holds true especially when the behavior in question is consistently observed within the broader context of the work environment;

7. When considering the incorporation of gamification into an onboarding program, it is advisable to select elements that prioritize the promotion of a directional and achievement-oriented work environment. Additionally, avoiding gamification that encourages

competition is important. At the same time, gamification can be oriented at eliciting other experiences, such as making the workplace more socially connected, immersive, or playful; however, other factors (e.g., characteristics of managers) will likely contribute more significantly to these experiences. Therefore, those gamification elements which target immersion, social experience, or playfulness should receive minimal consideration during the design of the onboarding program. It may seem intuitive that such a program should include gamification features to encourage new colleagues to interact with co-workers and get to know one another. However, there is a solid likelihood that this will not make a substantial difference in the socialization of new employees. A gamified onboarding program should aim to assist newcomers in familiarizing themselves with the new environment and highlighting their early achievements at work.

CONCLUSIONS

1. The study results show that a model of interrelationships between study variables (the socialization context (including gamification elements), gameful experience in the work environment, and socialization outcomes) has the appropriate goodness of fit parameters.
2. None of the proximal socialization outcomes (role clarity, social integration, task mastery, and organizational culture knowledge) in the overall socialization context are related to the interaction with gamification elements.
3. Interaction with gamification elements is not linked to the most distal socialization outcomes (job satisfaction, organizational commitment, turnover intentions, occupational stress) in the overall socialization context, with the exception of the organizational insider status. New employees who interact with gamification with less intensity are also more likely to feel like outsiders.
4. Considering the overall socialization context, gamification elements are only related to certain dimensions of the gameful experience in the work environment: while high-intensity interaction with gamification is mainly linked to the challenge dimension, any interaction is connected to accomplishment, guidance, and challenge. Different aspects of gameful experience in the work environment are more related to other socialization context variables (socialization resources, relationship with a supervisor, and the alignment of one's specialization with a job) than to gamification elements.
5. Considering the overall socialization context, dimensions of gameful experience in the work environment predicted most of the socialization outcomes, with the exception of task mastery:
   - Guidance positively predicted role clarity.
   - Social experience positively predicted social integration, while competition predicted it negatively.
   - Social experience, playfulness, and accomplishment positively predicted organizational cultural knowledge.
   - Social experience, accomplishment, and immersion positively predicted internalization.
   - Social experience, accomplishment, playfulness, and immersion positively predicted identification.
   - Social experience and accomplishment negatively predicted turnover intentions.

- Social experience, playfulness, and accomplishment positively predicted job satisfaction.
- Challenge positively predicted occupational stress, while playfulness and accomplishment predicted it negatively.
- Social experience and immersion positively predicted the organizational insider status.

SANTRAUKA

ĮVADAS

Naujo darbo pradžia yra gana svarbus įvykis tiek pačiam asmeniui, tiek jį įdarbinančiai organizacijai. Tai, kaip naujokas integruojasi į naują darbinę aplinką, gali būti susiję su įvairiais teigiamais padariniais. Pavyzdžiui, tikėtina, kad tinkamai naujame darbe prisitaikęs asmuo bus patenkintas savo darbu, gerai jausis tarp kolegų ir galės atskleisti savo potencialą. Organizacija taip pat gauna naudos iš sklandžios naujų darbuotojų integracijos. Kuo greičiau asmuo įsilieja į savo naują poziciją, tuo greičiau įmonė gali praturtinti savo žmogiškąjį kapitalą ir tikėtis grįžtamosios grąžos. Tai patvirtina tyrimai, rodantys, kad sėkmingai integravęsi darbuotojai dažnai yra produktyvesni, turi teigiamų nuostatų dėl savo darbo ir paprastai ilgiau pasilieka dirbti organizacijoje (Bauer et al., 2007).

Šis virsmas iš pašaliečio į tikrąjį organizacijos narį (angl. *organizational insider*) vadinamas organizacine socializacija (Bauer et al., 2007). Netrukus po įsidarbinimo darbuotojai susipažįsta su savo naujomis atsakomybėmis, bendradarbiais ir pačios organizacijos veikimu. Jie taip pat įvertina naujo darbo atitiktį turėtiems lūkesčiams ir savo ilgalaikes perspektyvas pasilikti organizacijoje (Wanberg, 2012). Žinoma, naujų darbuotojų socializacija yra gana sudėtingas procesas, nes jo sėkmė priklauso nuo daugelio individualių ir organizacinių veiksnių. Čia svarbu pabrėžti ir tai, kad organizacinė socializacija neretai vyksta nuolatos besikeičiančiame darbiniame kontekste, kuris kelia unikalių problemų ir iššūkių.

Disertacijos aktualumas
Technologiniai, socialiniai, ekonominiai ir visuomeniniai pokyčiai gali turėti reikšmingą poveikį darbuotojų elgesiui. Viena vertus, nuolatinio ryšio per skaitmenines priemones palaikymas skatina vis dažnesnį darbo susiliejimą su asmenine erdve ir laiku (Gregg, 2011). Kita vertus, žmogiškųjų išteklių valdymas susiduria su naujomis ir reikšmingomis problemomis dėl dažnėjančios darbuotojų tendencijos vis dažniau keisti darbovietes (Luca, 2016). Į darbo rinką įsiliejantys jauni asmenys pasižymi aukštu savimonės lygiu, tačiau jiems trūksta lojalumo darbdaviui (Lee et al., 2017). Dažna darbuotojų kaita ne tik kelia grėsmę įmonių konkurencingumui rinkoje, bet ir didina žmogiškųjų išteklių valdymo išlaidas (Park & Shaw, 2013). Svarbu pabrėžti ir tam tikrus darbuotojų lūkesčių skirtumus. Pavyzdžiui, „Z karta" pirmenybę teikia savarankiškam ir technologijomis grindžiamam mokymuisi (Chillakuri, 2020). Šie darbuotojai naujo darbo pradžioje tikisi gauti paruoštas

darbo priemones ir būtinus mokymus, kad kuo greičiau įsitrauktų į darbą ir veiktų savarankiškai. Taip pat pažymėtina ir netradicinių darbo formų reikšmė. Vis labiau populiarėjantis nuotolinis darbas kelia naujus darbuotojų socializacijos iššūkius. Jis gali būti susijęs su didesne darbuotojų kaitos tikimybe, ypač tai atvejais, kai nuotoliu dirbantys darbuotojai jaučiasi atskirti nuo organizacijos ir suvokia turintys mažesnių karjeros augimo galimybių (Hopkins & Bardoel, 2023). Atsižvelgiant į visa tai, natūralu, kad šiuolaikinės organizacijos ieško inovatyvių strategijų, kurios ilgainiui padėtų išlaikyti turimą žmogiškąjį kapitalą.

Žaidybinimas (angl. *gamification*) yra viena iš priemonių, kuri vis plačiau integruojama į įvairius organizacinius procesus. Spartų jos plitimą paskatino prielaida, kad žaidybinimas gali padidinti darbuotojų motyvaciją, įsitraukimą ir veiklos rezultatus (Nah et al., 2019). Pažymėtina, kad žaidybinimas į organizacijas patenka ne tik dėl jo tiesioginio diegimo; nemažai darbo aplinkoje naudojamos programinės įrangos turi integruotus žaidybinimo elementus (Larson, 2020), o tai prisideda prie to, kad vis daugiau darbuotojų susiduria su šiuo reiškiniu.

Nepaisant praktinio žaidybinimo taikymo organizaciniame kontekste, jo veiksmingumas kelia abejonių. Tai yra matoma nevienodai vertinamuose moksliniuose tyrimuose. Tam tikrais atvejais žaidybinimas gali duoti palankių rezultatų, tokių kaip didesnis įsipareigojimas organizacijai (pavyzdžiui, Hussain et al., 2018) ar pasitenkinimas darbu (pavyzdžiui, Silic et al., 2020). Vis dėlto kartais jis neduoda numatomo rezultato, tokio kaip padidėjęs darbo našumas (pavyzdžiui, Ramadhan & Irawanto, 2023), arba gali sukelti nepageidaujamų padarinių darbuotojams, tokių kaip stresas (pavyzdžiui, Hammedi et al., 2021).

Svarbu pabrėžti ir tai, kad žaidybinimo tyrimai yra tarpdisciplininiai. Šį reiškinį tiria vadybos, edukacijos, psichologijos ir kitų sričių mokslininkai. Atsižvelgiant į tai žaidybinimas tyrimuose gali būti operacionalizuojamas skirtingai. Anot Landers ir Marin (2021), organizacinės srities empiriniuose žaidybinimo intervencijų tyrimuose neretai trūksta išsamaus šių strategijų kūrimo aprašymo, o tai apsunkina ne tik tyrimų pakartojimą, bet ir tolesnę jų rezultatų plėtotę.

Skirtingose organizacijose žaidybinimo taikymas sulaukia nevienodos sėkmės. Nepaisant to, žaidybinimas veikiausiai ir toliau bus naudojamas darbiniame kontekste, neatsižvelgiant į jo taikymo pagrįstumą. Vadinasi, nauji darbuotojai neišvengiamai pateks į aplinką, kurioje bus pritaikyti sužaidybinti darbo procesai. Vis dėlto tyrimų, kuriuose būtų nagrinėjamas žaidybinimo ir naujų darbuotojų socializacijos ryšys, yra nedaug; taip pat juose daugiausia dėmesio skiriama tik įvedimo į darbą procesui (angl. *onboarding*)

(pavyzdžiui, Heimburger et al., 2020; Bell et al., 2020). Šiuo atveju galima teigti, kad sąveikos su žaidybinimo elementais padariniai naujiems darbuotojams išsamiai nėra tirti. Atsižvelgiant į nevienodus žaidybinimo taikymo darbo aplinkoje rezultatus, tikėtina, kad teigiami rezultatai gali būti aktualūs ir naujiems darbuotojams, pavyzdžiui, prisidėti prie efektyvaus darbuotojų integracijos klausimų sprendimo. Vis dėlto taip pat yra tikimybė, kad žaidybinimas neturi jokio poveikio naujiems darbuotojams, kas reikštų netikslingą organizacijos išteklių naudojimą. Be to, neatmestina tikimybė, kad žaidybinimas gali turėti ir neigiamą poveikį naujokams. Tam, kad būtų išsklaidyti minėti hipotetiniai samprotavimai, šiuo darbu yra siekiama žaidybinimo perspektyvoje plačiau ištirti konteksto, kuriame vyksta darbuotojų socializacija, ir naujų darbuotojų socializacijos pasekmių sąsajas.

Mokslinis naujumas
Ši disertacija praplečia esamus darbuotojų socializacijos ir žaidybinimo tyrimus, nes joje daugiausia dėmesio kreipiama ne tik į naujų darbuotojų įvedimo į darbą patirtį, bet kartu yra akcentuojama organizacinės socializacijos kaip plataus proceso samprata. Be to, mokslininkai, keliantys prielaidas dėl šios srities neišbaigtumo, pabrėžia, kad labai svarbu įvertinti, kaip organizacijos vertybės ir kultūrinės normos perduodamos pasitelkiant šiuolaikines technologijas ir skaitmenines priemones (Ellis et al., 2015a).

Nors tyrimų, susijusių su žaidybinimu ir darbuotojų įvedimu į darbą, yra nedaug, jie dažniausiai būna kvazieksperimentinio pobūdžio (pavyzdžiui, Brull et al., 2017; Burns, 2019). Paprastai žaidybinimas yra naudojamas kaip intervencinė priemonė, siekiant įvertinti jos poveikį darbuotojų socializacijai, pavyzdžiui, žaidybinimo elementais praturtinus darbuotojų įvedimo programą arba tai pačiai funkcijai atlikti skirtą mobiliąją programėlę. Vis dėlto, anot Wanberg (2012), organizacinė socializacija nesibaigia darbuotojų orientavimo ar įvedimo į darbą programomis; šis procesas trunka ir toliau, nes darbuotojai nesustoja mokytis apie savo darbo funkcijas ir atsakomybes. Remiantis socializacijos taktikų teorijos (Van Maanen ir Schein, 1979) įžvalgomis, galima daryti išvadą, kad pradinė darbuotojų patirtis naujoje darbovietėje gali labai skirtis, nes organizacijų taikomų socializacijos metodų apimtis, trukmė ir turinys yra labai įvairūs. Atsižvelgiant į tai, tiriant žaidybinimą izoliuotai įvedimo programų kontekste, daugiausia galima kelti prielaidas apie jo veiksmingumą šioms priemonėms, tačiau ne visam socializacijos procesui, kuris gali būti tiek tęstinis, tiek neapibrėžtas (Katz, 1980; Taormina, 1997).

Kitas probleminis aspektas, pastebimas mokslinėje literatūroje, yra žaidybinimo konceptualizavimas. Šis reiškinys dažnai yra apibūdinamas tik

jo struktūriniais elementais (pavyzdžiui, Girdauskienė et al., 2022). Vis dėlto besikeičiantis požiūris į žaidybinimą rodo, kad atskiras jo elementų nagrinėjimas, neatsižvelgiant į jų sukeliamus psichologinius padarinius, yra nepakankamas (Huotari & Hamari, 2017). Tais atvejais, kai tyrimuose atsižvelgiama į darbuotojų žaidimines patirtis (pavyzdžiui, Schmidt et al., 2023), jos neretai yra laikomos vienadimensiu konstruktu, o tai apsunkina gautų rezultatų atkartojimą ir pritaikymą. Pavyzdžiui, tokių veiksnių kaip varžymosi jausmas ir žaismingumas sujungimas į vieną darinį atrodo problemiškas sąsajoms su įvairiais organizaciniais kintamaisiais vertinti.

Analizuojant žaidybinimą darbo aplinkoje taip pat pastebima, kad į šį reiškinį dažnai žiūrima kaip į atsietą nuo visumos priemonę. Moksliniuose tyrimuose neatsižvelgiama į kompleksinius žaidybinimo taikymo būdus. Organizacijoje vienu metu gali būti tiek įgyvendinami keli sužaidybinti vadybiniai procesai, tiek naudojama sužaidybinta programinė įranga, todėl suprantama, kad šio reiškinio paplitimo mastas darbo aplinkoje gali būti labai įvairus. Šis įvairiapusiškumas išryškėja analizuojant žaidybinimo sukeliamas patirtis, kurios, kaip pastebima, nebūtinai kyla tik iš vieno šaltinio (Högberg et al., 2019).

Šioje disertacijoje yra atsižvelgiama į pirmiau išvardytus probleminius aspektus, taip išplečiant ir pagilinant darbuotojų socializacijos ir žaidybinimo tyrimų lauką. Šiame darbe kartu yra pristatomas ir naujas, žaidiminių patirčių darbo aplinkoje, konstruktas, kuris perteikia platesnį potyrių spektrą, potencialiai atsirandančių dėl žaidybinimo taikymo darbo aplinkoje. Jis įtraukia ne tik iš įvairių šaltinių kylančio žaidybinimo poveikį, bet ir kitus tiesiogiai su šiuo reiškiniu nesusijusius veiksnius. Be to, žaidiminėms patirtims darbo aplinkoje vertinti buvo sukurtas instrumentas, atitinkantis būtinus psichometrinius parametrus. Svarbu akcentuoti ir tai, kad disertacijos tyrime dalyvavo gana mišri grupė, sudaryta iš dviejose šalyse bei įvairiuose sektoriuose dirbančių naujų darbuotojų, o tai leidžia padidinti tyrimo rezultatų aktualumą ir pritaikymą.

Praktinė reikšmė
Šiame tyrime plačiai nagrinėjama, kaip darbo vietoje naudojami žaidybinimo elementai yra susiję su naujų darbuotojų socializacija. Atsižvelgiant į tai disertacijos rezultatai ir išvados organizacijoms gali suteikti vertingų įžvalgų, kurie žaidybinimo aspektai yra susiję su pageidaujamomis ar nepageidaujamomis socializacijos pasekmėmis. Atitinkamai pagal tai organizacijos gali išanalizuoti ir iš naujo įsivertinti savo taikomas žaidybinimo priemones ir jų reikšmę naujiems darbuotojams. Tyrime nustatytos sąsajos leidžia daryti prielaidas apie tai, kas yra daroma teisingai, arba potencialiai

gali lemti nepageidaujamus rezultatus ateityje. Be to, atsižvelgiant į disertacijos rezultatus, organizacijos gali kurti arba modifikuoti naujiems darbuotojams taikomas sužaidybintas priemones – pavyzdžiui, orientavimo ar įvedimo į darbą programas. Rengiant jas, svarbiausias dėmesys turėtų būti skiriamas naujų darbuotojų patirčiai, o tada – jos sukūrimui tinkamus žaidybinimo elementus. Tyrimo rezultatai parodo, kokios yra žaidiminių patirčių ir socializacijos pasekmių sąsajos. Apibendrinant reikia pažymėti, kad disertacijos išvados leidžia organizacijoms strategiškiau pažvelgti į darbuotojų socializaciją žaidybinimo perspektyvoje.

<p style="text-align:center">Tyrimo tikslas, uždaviniai, modelis ir ginamieji teiginiai</p>

Išanalizuota darbuotojų socializacijos ir žaidybinimo literatūra leido sudaryti šio tyrimo teorinį modelį (1 paveikslas). Apibendrinant galima teigti, kad šioje disertacijoje daugiausia dėmesio kreipiama ne į sužaidybintų programų, taikomų naujiems darbuotojams, veiksmingumą, bet į tai, kaip yra susijęs žaidybinimas su šių darbuotojų socializacijos pasekmėmis, jiems susiduriant su žaidybinimu kasdieniame darbiniame kontekste.
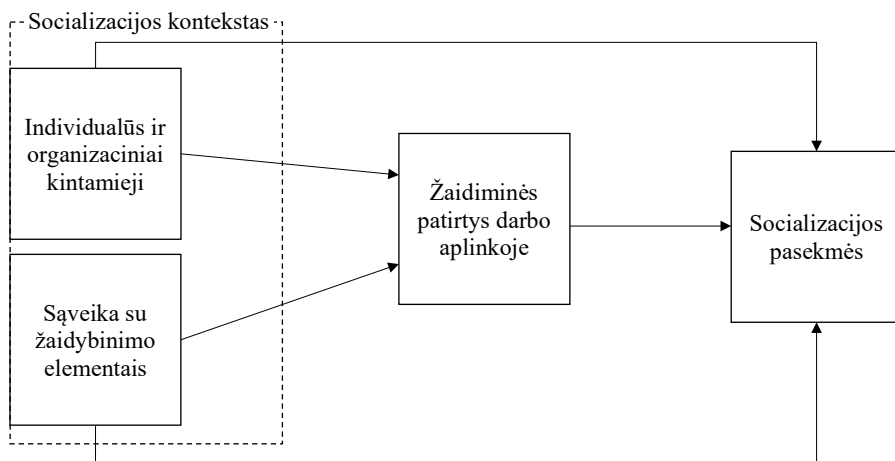
1 paveikslas. *Tyrimo teorinis modelis*

Tyrimo tikslas: ištirti naujų darbuotojų socializacijos konteksto ir socializacijos pasekmių sąsajas žaidybinimo perspektyvoje.

Tyrimo uždaviniai:
1. Įvertinti naujų darbuotojų sąveikos su žaidybinimo elementais darbo aplinkoje būdus;

2. Ištirti naujų darbuotojų žaidiminių patirčių darbo aplinkoje sąsajas su individualiais ir organizaciniais kintamaisiais bei sąveika su žaidybinimo elementais;
3. Ištirti naujų darbuotojų socializacijos pasekmių sąsajas su individualiais ir organizaciniais kintamaisiais bei su žaidybinimu susijusiais veiksniais;
4. Integruoti nustatytas socializacijos konteksto, žaidiminių patirčių darbo aplinkoje ir socializacijos pasekmių sąsajas į vientisą modelį.

Ginamieji teiginiai:
1. Bendrame darbuotojų socializacijos kontekste tiesioginis naujokų sąveikos su žaidybinimo elementais ir jų socializacijos pasekmių ryšys potencialiai yra užgožiamas kitų kontekstinių veiksnių ar su žaidybinimu susijusių patirčių suvokimo;
2. Žaidiminių patirčių darbo aplinkoje svarba socializacijos pasekmėms turėtų būti analizuojama platesnėje perspektyvoje, įtraukiant ir kitus socializacijos konteksto veiksnius, o ne vien sutelkiant dėmesį tik į naujokų sąveiką su žaidybinimo elementais.

METODIKA

Tyrimo procedūra

Tyrimo tikslui ir uždaviniams įgyvendinti buvo pasirinkta skerspjūvio tyrimo strategija. Ji buvo įgyvendinama parengiant klausimyną, skirtą įvairiems su darbu susijusiems veiksniams įsivertinti. Tiriamųjų paieška vyko *Prolific* (https://www.prolific.com) platformoje, kuri specializuojasi tyrimų, įskaitant ir mokslinius, dalyvių pritraukimu.

Prolific platformos vartotojai iš anksto yra pateikę tam tikrus duomenis apie save – sociodemografinę ir kitą tyrimams aktualią informaciją. Tai leido užtikrinti, kad tyrimo klausimynas bus pateikiamas tik tiems vartotojams, kurie atitinka tyrimo imčiai keliamus reikalavimus. Šiuo atveju buvo pasirinkti šie paieškos kriterijai: 1) tyrimo dalyviai yra iš Jungtinės Karalystės arba Jungtinių Amerikos Valstijų; 2) jų gimtoji kalba yra anglų; 3) dabartinėse savo darbovietėse dirba ne ilgiau kaip vienerius metus; 4) jų darbovietes galima priskirti didelėms organizacijoms. Šiuos kriterijus atitiko 2 010 vartotojų, iš kurių tyrimo klausimynas atsitiktinai buvo išsiųstas 641 vartotojui, o jį baigė pildyti 613 vartotojų. Už iki galo užpildytus klausimynus buvo suteikiamas finansinis atlygis. Prieš pildydami klausimyną, tiriamieji

turėjo susipažinti su pateikta informuoto sutikimo forma ir pažymėti, kad jie sutinka ar nesutinka dalyvauti tyrime.

Duomenų patikimumui užtikrinti klausimyne buvo renkama informacija apie tiriamųjų darbo trukmę; taip pat atsitiktinėse vietose buvo įterpti trys kontroliniai klausimai. Tais atvejais, jei tiriamieji nurodė dirbantys savo dabartinėje darbovietėje ilgiau nei vienerius metus, netinkamai atsakė į bent vieną kontrolinį klausimą arba klausimyną pildė tendencingai, jų duomenys buvo šalinami iš tolesnės tyrimo eigos. Įvertinus šiuos aspektus, tyrimo analizėje buvo naudojami 575 tiriamųjų klausimynų duomenys.

Tyrimo dalyviai

Tyrimo imtį sudarė 282 vyrai (49 %) ir 293 moterys (51 %). Jų amžiaus vidurkis – 32,87 metai (SD = 10,20). Dauguma tiriamųjų (83 %) gyveno Jungtinėje Karalystėje. Daugiau nei pusė respondentų (63 %) turėjo bakalauro ar aukštesnį išsilavinimą. Dažniausiai pasitaikiusios profesinės sritys, kuriose dirbo tiriamieji, buvo informacinės technologijos (15 %), klientų aptarnavimas (13 %) bei švietimas (11,5 %). Pabrėžtina, kad beveik visi tiriamieji (95,8 %) turėjo ankstesnės darbo patirties kitose darbovietėse, o beveik pusės jų (47,5 %) bendra darbinė patirtis siekė 10 ar daugiau metų. Tuo tarpu dabartinėje savo darbovietėje respondentai vidutiniškai buvo dirbantys 6,92 mėnesio (SD = 3,21). Taip pat svarbu pažymėti, kad 28,9 % tyrimo dalyvių nurodė, kad eidami savo pareigas turi pavaldžių asmenų.

Tyrimo instrumentai

Tiek tyrimo klausimynas, tiek jame esantys instrumentai buvo pateikiami anglų kalba. Naudoti visas vertinimo priemones, kurios nebuvo specialiai kuriamos šiam tyrimui, buvo gautas jų autorių leidimas.

Individualūs ir organizaciniai kintamieji

Sociodemografiniai veiksniai. Tyrimo klausimyne tiriamieji turėjo nurodyti savo amžių, lytį, įgytą išsilavinimą ir bendrą darbo patirtį.

Dabartinio darbo ypatybės. Tyrimo dalyvių buvo prašoma nurodyti darbo dabartinėje darbovietėje trukmę; taip pat – ar šis darbas yra pirmasis jų karjeroje ir ar, be šio darbo, jie turi kitų darbinių įsipareigojimų. Respondentų taip pat buvo prašoma pateikti informaciją apie jų dabartinio darbo grupės dydį, etato dydį, kiek šis darbas atitinka jų specialybę, ar turi pavaldinių vykdydami einamas pareigas ir kokią laiko dalį jie dirba nuotoliu.

Santykiai su vadovu. Siekiant įvertinti vadovo ir pavaldinio santykių kokybę (angl. *leader-member exhange*), buvo naudojama LMX-7 skalė (Graen & Uhl-Blen, 1995). Ši skalė yra sudaryta iš 7 teiginių, iš kurių kiekvienas turi būti įvertintas 5 balais, čia 1 – žemiausia vertinamo teiginio reikšmė, o 5 – didžiausia. Kuo didesnis skalės teiginių suminis įvertis, tuo vadovo ir pavaldinio santykių kokybė yra aukštesnė. Remiantis tyrimo duomenimis, šios skalės teiginių vidinis suderintumas buvo pakankamas (Cronbach α = 0,864).

Socializacijos ištekliai (angl. *socialization resources*). Tam, kad būtų įvertinta, kokius socializacijos išteklius iš savo organizacijų yra gavę nauji darbuotojai, remiantis socializacijos išteklių teorija (Saks & Gruman, 2012), buvo sukurta nauja tyrimo skalė. Ši vertinamoji priemonė skirta dviejų tipų socializacijos ištekliams: su darbu susijusiems (fiziniai ištekliai ir įrankiai, kurie yra tiesiogiai prieinami naujokams ir būtini jų užduotims atlikti) bei socialinio kapitalo (apima socialinius renginius, vadovų paramą, sąveiką su socializacijos agentais ir ryšių plėtojimą) vertinti. Su darbu susiję ištekliai vertinti 7 teiginiais (jų Cronbach α = 0,886), o socialinio kapitalo – 4 teiginiais (jų Cronbach α = 0,726). Kuo didesnis kiekvienos poskalės teiginių suminis įvertis, tuo daugiau atitinkamo tipo išteklių nauji darbuotojai yra gavę iš savo organizacijų. Patvirtinamoji faktorinė analizė identifikavo tinkamą skalės struktūrą: $\chi^2 = 174{,}413$, df = 42, p < 0,001; RMSEA = 0,076, CFI = 0,958, TLI = 0,942, SRMR = 0,037.

Su žaidybinimu susiję veiksniai

Sąveika su žaidybinimo elementais. Tam, kad būtų įvertinta, su kokiais žaidybinimo elementais tyrimo dalyviai susiduria savo darbo aplinkoje, jiems buvo pateikti aštuonių žaidybinimo elementų aprašymai[1]: „taškai, taškų sistemos" (*taškai*), „lyderių lentos", „ženkleliai, trofėjai" (*ženkleliai*), „lygiai, lygių sistemos" (*lygiai*), „progreso sekimas, progreso juostos" (*progreso juostos*), „pokalbių kanalai, klanai, gildijos" (*gildijos*), „iššūkiai", „varžybos, konkursai" (*konkursai*). Peržiūrėję žaidybinimo elementų aprašymus, tiriamieji turėjo nurodyti, ar yra susidūrę su kuriuo nors iš šių elementų savo darbo aplinkoje. Jei tiriamieji nurodė, kad savo darbo aplinkoje susidūrė su

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[1] Skliausteliuose pateikiamas žaidybinimo elemento pavadinimas apibūdina, kaip jis vėliau bus referuojamas duomenų analizėje. Pavyzdinis žaidybinimo elemento aprašymas: „taškai, taškų sistemos" – realūs arba virtualūs taškai, skiriami už atliktas užduotis arba įvykdytas veiklas, kuriuos vėliau galima panaudoti, pavyzdžiui, įsigyti prekių arba paslaugų.

kuriuo nors žaidybinimo elementu, kiekvienas iš jų 6 balų skalėje turėjo būti įvertintas pagal tai, kaip dažnai su juo susiduriama (1 – „labai retai", o 6 – „labai dažnai") ir kaip aktyviai įsitraukiama į su šiuo elementu susijusias veiklas (1 – „visiškai neįsitraukiu", o 6 – „labai aktyviai įsitraukiu"). Atsižvelgiant į tuos žaidybinimo elementus, su kuriais nauji darbuotojai susidūrė savo darbo aplinkoje, šie įverčiai buvo naudojami vidutiniams sąveikos su žaidybinimu dažnumo ir įsitraukimo balams apskaičiuoti.

Žaidiminės patirtys darbo aplinkoje. Siekiant įvertinti naujų darbuotojų žaidimines patirtis darbo aplinkoje, buvo pasitelkta GAMEFULQUEST modelio (Högberg et al., 2019) koncepcija ir jos pagrindu sukurtas tyrimo instrumentas. Šiame modelyje yra septynios žaidiminių patirčių dimensijos: žaismingumo (angl. *playfulness*), pasiekimo (angl. *accomplishment*), iššūkio (angl. *challenge*), socialinės patirties (angl. *social experience*), nukreiptumo (angl. *guidance*), pasinėrimo (angl. *immersion*) ir varžymosi (angl. *competition*). Kiekvienai iš šių dimensijų matuoti buvo sukurta po tris teiginius, kuriuos tiriamieji turėjo įvertinti pagal 5 balų skalę (1 – „visiškai nesutinku", o 5 – „visiškai sutinku"). Rengiant teiginius laikytasi principo, kad jų taikymas turi būti skirtas bendrai darbo aplinkai, o ne atskiroms sužaidybintoms sistemoms ar priemonėms. Remiantis tyrimo duomenimis, kiekvienos žaidiminių patirčių dimensijos teiginiai pasižymėjo pakankamu vidiniu suderintumu (Cronbach α reikšmės svyravo nuo 0,730 iki 0,860), o patvirtinamoji faktorinė analizė identifikavo tinkamą skalės struktūrą: $\chi^2 = 505{,}139$, df = 168, p < 0,001; RMSEA = 0,059, CFI = 0,952, TLI = 0,940, SRMR = 0,059.

Socializacijos pasekmės

Vaidmens aiškumas (angl. *role clarity*). Įvertinti, kiek nauji darbuotojai yra tikri dėl to, ko iš jų tikimasi atliekant darbą, buvo naudojama Morrison (1993) šešių teiginių vaidmens aiškumo skalė. Kuo didesnis skalės teiginių suminis įvertis, tuo aiškesnis darbuotojų vaidmuo. Kiekvienas teiginys turėjo būti įvertintas pagal 5 balų skalę (1 – „visiškai nesutinku", o 5 – „visiškai sutinku"). Remiantis tyrimo duomenimis, šios skalės teiginių vidinis suderintumas buvo pakankamas (Cronbach α = 0,867).

Socialinė integracija (angl. *social integration*). Siekiant įvertinti, kiek nauji darbuotojai jaučiasi įsilieję į savo darbo grupę, buvo naudojama Morrison (2002) septynių teiginių socialinės integracijos skalė. Kuo didesnis skalės teiginių suminis įvertis, tuo didesnė darbuotojų socialinė integracija.

Kiekvienas teiginys turėjo būti įvertintas 5 balų skale (1 – „visiškai nesutinku", o 5 – „visiškai sutinku"). Remiantis tyrimo duomenimis, šios skalės teiginių vidinis suderintumas buvo pakankamas (Cronbach α = 0,858).

Užduočių atlikimo meistriškumas (angl. *task mastery*). Tam, kad nauji darbuotojai įsivertintų, kiek jaučiasi gebantys veiksmingai atlikti jiems skirtus darbinius įsipareigojimus, panaudota Morrison (2002) šešių teiginių užduočių atlikimo meistriškumo skalė. Kuo didesnis skalės teiginių suminis įvertis, tuo didesnis darbuotojų užduočių atlikimo meistriškumas. Kiekvienas teiginys turėjo būti įvertintas pagal 5 balų skalę (1 – „visiškai nesutinku", o 5 – „visiškai sutinku"). Remiantis tyrimo duomenimis, šios skalės teiginių vidinis suderintumas buvo pakankamas (Cronbach α = 0,840).

Organizacinės kultūros žinios (angl. *organizational culture knowledge*). Siekiant įvertinti, kiek darbuotojai supranta apie savo organizacijos kultūrą ir funkcionavimą, buvo sukurtas šį aspektą vertinantis instrumentas. Remiantis Sinha (2008) išskirtais organizacinės kultūros elementais (vertybės, elgsena, santykiai, technologijos, struktūra, procedūros, tikslai ir uždaviniai), kiekvienam iš jų pritaikytas teiginys, pagal kurį tiriamieji 5 skalės balais turėjo įsivertinti, kiek yra susipažinę su atitinkamu organizacinės kultūros elementu (1 – „visiškai nesutinku", o 5 – „visiškai sutinku"). Tyrimo duomenimis, šio instrumento teiginiai pasižymėjo pakankamu vidiniu suderintumu (Cronbach α = 0,913), o patvirtinamoji faktorinė analizė identifikavo tinkamą skalės struktūrą: $\chi^2 = 65,181$, df = 14, p < 0,001; RMSEA = 0,080, CFI = 0,978, TLI = 0,967, SRMR = 0,024.

Darbinis stresas (angl. *occupational stress*). Naujų darbuotojų patiriamam streso lygiui įvertinti buvo naudojama Marcatto ir kolegų (2022) sukurta suvokto darbinio streso skalė (angl. *The Perceived Occupational Stress Scale*). Kuo didesnis skalės teiginių suminis įvertis, tuo darbuotojai patiria didesnį streso lygį. Kiekvienas iš keturių skalės teiginių turėjo būti įvertintas pagal 5 balų skalę (1 – „visiškai nesutinku", o 5 – „visiškai sutinku"). Remiantis tyrimo duomenimis, šios skalės teiginių vidinis suderintumas buvo pakankamas (Cronbach α = 0,893).

Įsipareigojimas organizacijai (angl. *organizational commitment*). Naujų darbuotojų įsipareigojimas organizacijai buvo vertinamas pagal O'Reilly ir Chatman (1986) skalę, išskiriančią tris šio reiškinio dimensijas: 4 teiginiai buvo skirti paklusimui (angl. *compliance*) (instrumentinis įsitraukimas dėl išorinio atlygio), 3 teiginiai – identifikacijai (angl. *identification*)

(įsitraukimas dėl noro priklausyti), ir 5 teiginiai – internalizacijai (angl. *internalization*) (įsitraukimas dėl asmeninių ir organizacijos vertybių suderintumo) matuoti. Kuo didesnis kiekvienos dimensijos teiginių suminis įvertis, tuo ji yra stipresnė. Nors identifikacijos (Cronbach α = 0,812) ir internalizacijos (Cronbach α = 0,891) teiginių vidinis suderintumas buvo pakankamas, tačiau paklusimo dimensija nepasižymėjo tinkamu įverčiu (Cronbach α = 0,467), todėl tolesnėje analizėje jos duomenys nebuvo naudojami.

Ketinimas išeiti iš darbo (angl. *turnover intentions*). Naujų darbuotojų ketinimui išeiti iš dabartinio darbo įvertinti buvo naudojami trys teiginiai. Pavyzdžiui, „Dažnai galvoju apie išėjimą iš dabartinio darbo". Kuo didesnis skalės teiginių suminis įvertis, tuo darbuotojai turi stipresnį ketinimą palikti savo darbovietę. Kiekvienas skalės teiginys turėjo būti įvertintas pagal 5 balų skalę (1 – „visiškai nesutinku", o 5 – „visiškai sutinku"). Remiantis tyrimo duomenimis, šio instrumento teiginių vidinis suderintumas buvo pakankamas (Cronbach α = 0,895).

Pasitenkinimas darbu (angl. *job satisfaction*). Naujų darbuotojų pasitenkinimas darbu buvo matuojamas vienu teiginiu: „Kiek apskritai esate patenkintas savo darbu?" Šis teiginys turėjo būti įvertintas 10 balų skale, kurios aukštesni balai rodo didesnį bendrą pasitenkinimą darbu.

Jautimasis tikruoju organizacijos nariu (angl. *organizational insider status*). Naujokų suvokimas, kiek jie jaučiasi esantys tikrieji organizacijos nariai, buvo vertinamas vienu teiginiu: „Atsižvelgdami į savo patirtį šioje organizacijoje, kiek šiuo metu jautiatės esantys tikruoju organizacijos nariu?" Šis teiginys buvo vertinamas 10 balų skale, čia 1 balas rodė, kad tiriamasis vis dar jaučiasi esąs naujokas, o 10 balų – tikrasis organizacijos narys.

Tyrimo kintamųjų apibendrinimas

Visų tyrime naudojamų kintamųjų ir jų ryšio pagal teorinį modelį apibendrinimas pateikiamas 2 paveiksle.

Individualūs ir organizaciniai kintamieji	**Žaidiminės patirtys darbo aplinkoje**	**Socializacijos pasekmės**
Amžius Lytis Išsilavinimas Šalis Darbo patirtis Darbo trukmė organizacijoje Pirmasis darbas Papildomas darbas Darbo atitiktis specialybei Etato dydis Pavaldinių turėjimas Darbo vieta Darbo grupės dydis Vadovo ir pavaldinio santykių kokybė Socialinio kapitalo ištekliai Su darbu susiję ištekliai	Pasiekimas Iššūkis Varžymasis Socialinė patirtis Nukreiptumas Pasinėrimas Žaismingumas	Vaidmens aiškumas Socialinė integracija Užduočių atlikimo meistriškumas Organizacinės kultūros žinios Pasitenkinimas darbu Identifikacija Internalizacija Ketinimas išeiti iš darbo Darbinis stresas Jautimasis tikruoju organizacijos nariu
Sąveika su žaidybinimo elementais Taškai Lyderių lentos Ženkleliai Lygiai Progreso juostos Gildijos Iššūkiai Konkursai		

2 paveikslas. *Tyrimo kintamieji ir jų sąsajos*

PAGRINDINIAI REZULTATAI

Naujų darbuotojų sąveika su žaidybinimo elementais

Atliekant tyrimo duomenų analizę iš pradžių buvo svarbu nustatyti, su kokiais žaidybinimo elementais nauji darbuotojai susiduria savo kasdienėje darbo aplinkoje. Šiuo tikslu tiriamiesiems buvo pateiktas žaidybinimo elementų sąrašas su jų aprašymais. Remdamiesi šia informacija, respondentai turėjo įsivertinti ir pažymėti tuos žaidybinimo elementus, su kuriais jiems yra tekę

sąveikauti dabartiniame darbe. Daugiau nei pusė tyrimo dalyvių (N = 348) teigė, kad iš pateikto sąrašo jiems yra tekę susidurti su bent vienu žaidybinimo elementu. Ši tiriamųjų grupės dalis vidutiniškai sąveikaudavo su 2,18 žaidybinimo elementų (SD = 1,35). 1 lentelėje yra pateikiamas detalus susidūrimo su žaidybinimo elementais kiekio pasiskirstymas.

1 lentelė. *Žaidybinimo elementų, su kuriais susiduriama darbo aplinkoje, kiekio pasiskirstymas*

Žaidybinimo elementų kiekis	N (%)
0	227 (39,48)
1	146 (25,39)
2	85 (14,78)
3	60 (10,43)
4	32 (5,57)
5	18 (3,13)
6	4 (0,70)
7	2 (0,35)
8	1 (0,17)

Įvertinus susidūrimo su skirtingais žaidybinimo elementais dažnumą, paaiškėjo, kad tiriamieji savo darbo aplinkoje dažniausiai sąveikaudavo su gildijomis (N = 152) ir progreso juostomis (N = 150). O su iššūkiais buvo susiduriama rečiausiai (N = 42). Kiekvieno žaidybinimo elemento pasiskirstymas pagal susidūrimą su juo darbo aplinkoje pateikiamas 2 lentelėje.

2 lentelė. *Žaidybinimo elementų, su kuriais susiduriama darbo aplinkoje, pasiskirstymas pagal tipą*

Žaidybinimo elementas	N
Gildijos	152
Progreso juostos	150
Ženkleliai	103
Konkursai	103
Lygiai	83
Lyderių lentos	65
Taškai	62
Iššūkiai	42

Tam, kad būtų galima susidaryti išsamesnį vaizdą, kaip nauji darbuotojai sąveikauja su žaidybinimo elementais darbo aplinkoje, jie buvo suklasifikuoti į atskirus sąveikos tipus. Šiam segmentavimui atlikti panaudotas dviejų faktorių klasterizavimo algoritmas, suskirstęs respondentus į atskiras grupes pagal bendrą žaidybinimo elementų, su kuriais susiduriama darbe, skaičių,

vidutinį šios sąveikos dažnumą ir įsitraukimo lygį. Klasterinės analizės metu buvo išbandyti modeliai su 2, 3 ir 4 klasterių sprendiniais. Įvertinus gautus rezultatus, 2 klasterių modelis pasižymėjo aukščiausiu vidutinio silueto pločio įverčiu (0,5), todėl jis tiksliausiai klasifikavo duomenis.

Remiantis pritaikytu 2 klasterių sprendiniu, pirmoji tiriamųjų grupė (N = 196) pasižymėjo sąlygiškai didesniu žaidybinimo elementų, su kuriais susiduriama darbo aplinkoje, skaičiumi (M = 2,77, SD = 1,47), taip pat dažnesne (M = 4,25, SD = 0,92) ir įtrauktesne sąveika su jais (M = 3,99, SD = 1,01). Priešingai, antroji tiriamųjų grupė (N = 152) susidūrė su sąlygiškai mažesniu žaidybinimo elementų skaičiumi darbo aplinkoje (M = 1,43, SD = 0,63) bei retesne (M = 2,50, SD = 0,92) ir mažiau įtrauktesne (M = 2,60, SD = 1,01) sąveika su jais. Šios grupės tyrimo kontekste atitinkamai yra įvardijamos „Aukštos sąveikos" ir „Žemos sąveikos" grupėmis.

Siekiant geriau suprasti šių dviejų klasterių struktūrą, buvo atlikta porinė dažnių lentelės analizė. Ja siekta nustatyti, kaip žaidybinimo elementai, su kuriais susiduriama darbo aplinkoje, pasiskirsto abiejose klasterių grupėse. Rezultatai (3 lentelė) leidžia daryti išvadą, kad visais atvejais yra matomas neproporcingas žaidybinimo elementų pasiskirstymas tarp klasterių – „Aukštos sąveikos" grupė pasižymėjo didesniu kiekvienu žaidybinimo elemento tipu, palyginti su „Žemos sąveikos" grupe. Šie rezultatai ne tik validuoja gautų klasterių struktūrą, bet ir parodo, kad klasteriai yra homogeniniai, atsižvelgiant į tiriamųjų darbe aptinkamus žaidybinimo elementus. Todėl tolesnėje analizėje abu klasterius galima interpretuoti kaip vientisus darinius, neatsižvelgiant į juos sudarančius žaidybinimo elementus.

3 lentelė. *Žaidybinimo elementų pasiskirstymas tarp sąveikos klasterių*

Žaidybinimo elementai	„Aukštos sąveikos" grupė (N = 196)	„Žemos sąveikos" grupė (N = 152)	χ^2	p
Taškai	48	14	13,65	<0,001
Lyderių lentos	52	13	18,22	<0,001
Ženkleliai	76	27	18,14	<0,001
Lygiai	63	20	16,99	<0,001
Progreso juostos	102	48	14,62	<0,001
Gildijos	102	50	12,76	<0,001
Iššūkiai	32	10	7,67	0,004
Konkursai	67	36	4,23	0,022

Kiti tyrimo dalyviai (N = 227), kurie iš pateikto sąrašo savo darbo aplinkoje nesusidūrė nė su vienu žaidybinimo elementu, buvo išskirti kaip „Nenustatytos sąveikos" grupė. Atsižvelgiant į tai, kad tiriamųjų

subjektyviam įsivertinimui buvo pateiktas ribotas žaidybinimo elementų skaičius, ši grupė rezultatų analizėje bus naudojama kaip referentinė grupė.

Socializacijos konteksto, žaidiminių patirčių darbo aplinkoje ir socializacijos pasekmių sąsajos: integralus modelis

Įvertinus veiksnius, rodančius geriausias prognostines charakteristikas (2 ir 3 uždavinio rezultatai), buvo sudarytas galutinis integralus modelis, sujungiantis socializacijos konteksto (įskaitant ir žaidybinimo elementus), žaidiminių patirčių darbo aplinkoje ir socializacijos pasekmių sąsajas. Šio modelio ryšiai buvo paremti teorinėmis literatūros analizės prielaidomis. Kintamieji, neparodę reikšmingų prognostinių sąsajų (2 ir 3 uždavinio rezultatai), nebuvo įtraukti į modelį. Jo tinkamumas įvertintas atlikus kelių analizę. Apibendrinant reikia pažymėti, kad tyrimo modelis buvo sudarytas iš 30 kintamųjų, susietų anksčiau nustatytais regresiniais ryšiais. Taip pat, remiantis koreliacine analize, į modelį buvo įtraukti papildomi kovariaciniai ryšiai tarp socializacijos pasekmių kintamųjų ir žaidiminių patirčių dimensijų (atsižvelgiant į modelio sudėtingumą, šie ryšiai vizualiai nėra perteikiami tolesniuose paveiksluose). Galutinis modelis pasižymėjo pakankamomis tinkamumo kriterijų reikšmėmis: $\chi^2 = 667{,}658$, df = 271, p < 0,001; RMSEA = 0,050, TLI = 0,924, CFI = 0,953, SRMR = 0,052.

Pabrėžtina, kad ne visi modelio ryšiai išliko statistiškai reikšmingi. Toliau yra išvardijami septyni iš jų, kuriuose nepriklausomas kintamasis (nurodytas kairėje rodyklės pusėje) nebeprognozavo priklausomo kintamojo (nurodyto dešinėje rodyklės pusėje): „Aukštos sąveikos" grupė → Pasinėrimas, „Aukštos sąveikos" grupė → Socialinė integracija, „Žemos sąveikos" grupė → Užduočių atlikimo meistriškumas, Nukreiptumas → Užduočių atlikimo meistriškumas, Darbo organizacijoje trukmė → Užduočių atlikimo meistriškumas, Varžymasis → Darbinis stresas, Pasinėrimas → Pasitenkinimas darbu. Atsižvelgiant į tai galima konstatuoti, kad sąveikos su žaidybinimo elementais reikšmė bendrame socializacijos kontekste yra šiek tiek sumažėjusi, be to, yra mažiau kintamųjų, paaiškinančių užduočių atlikimo meistriškumą. Dėl modelio vizualaus kompleksiškumo jo vaizdavimas tolesniuose paveiksluose išskaidytas į atskiras dalis pagal teorinio modelio kintamųjų grupių tarpusavio ryšius. Vis dėlto pažymėtina, kad iš 94 modelyje egzistuojančių regresinių ryšių 69 ryšiai iš jų yra laikytini silpnais (standartizuotų regresijos svorių reikšmė yra mažesnė nei 0,2).

Atsižvelgiant į modelio rezultatus, toliau pateikiamos svarbiausios įžvalgos, susijusios su artimosiomis socializacijos pasekmėmis (3–5 paveikslai):

- Su darbu susijusių išteklių gavimas ir aiškių gairių darbo aplinkoje suvokimas, taip pat aukštesnės kokybės santykiai su vadovu teigiamai prognozuoja naujo darbuotojo vaidmens aiškumą. Tuo tarpu darbas vidutinio dydžio darbo grupėje ir socialinio kapitalo ištekliai neigiamai paaiškina šio kintamojo duomenų sklaidą;
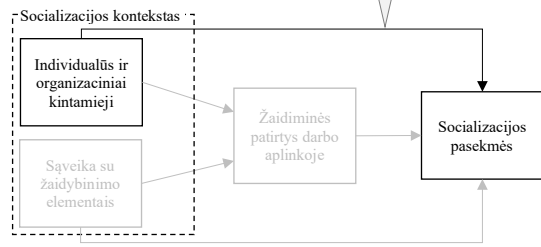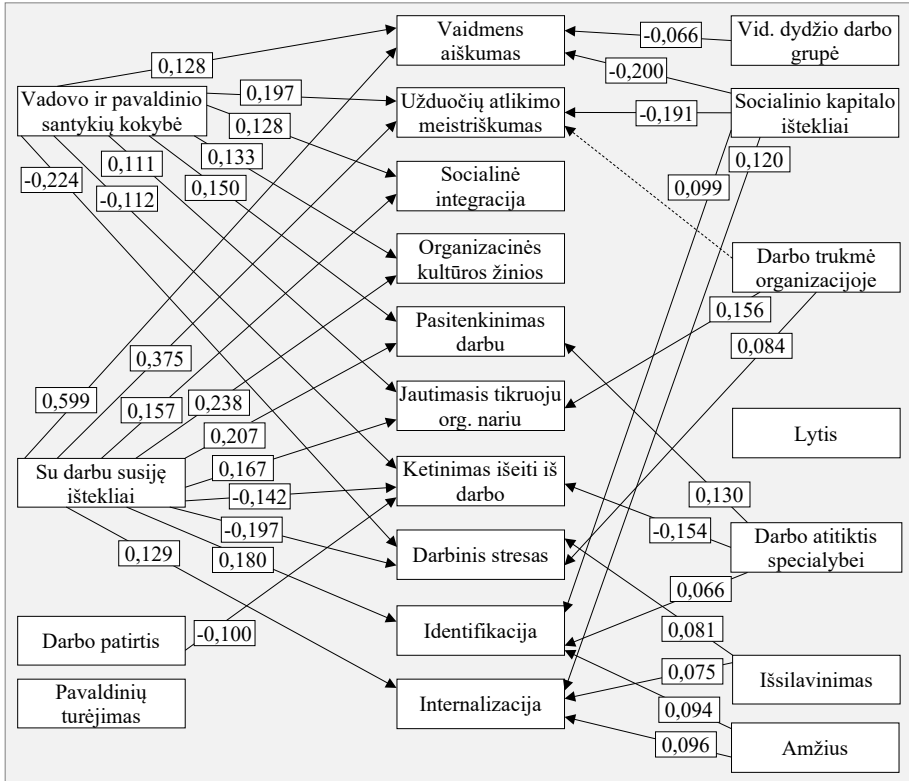
3 paveikslas. *Individualių ir organizacinių kintamųjų prognostinė reikšmė socializacijos pasekmėms integraliame modelyje (brūkšninė linija žymi nereikšmingą ryšį)*

- Naujokų socialinė integracija į darbo grupę gali būti paaiškinama remiantis socialinio susietumo darbo aplinkoje suvokimu, aukštesnės kokybės santykiais su vadovu ir su darbu susijusių išteklių aprūpinimu. Priešingai, varžymasis darbo aplinkoje gali neigiamai prognozuoti naujokų socialinę integraciją;
- Užduočių atlikimo meistriškumo duomenų sklaidą paaiškina aukštesnė santykių su vadovu kokybė ir su darbu susijusių išteklių suteikimas. Tuo tarpu socialinio kapitalo ištekliai šį kintamąjį prognozuoja neigiamai;

Nukreiptumas — 0,242 → Vaidmens aiškumas

Užduočių atlikimo meistriškumas

Socialinė patirtis — 0,409 — 0,183 — 0,252 — 0,204 — 0,136 — -0,182 — 0,191

Varžymasis — -0,111 → Socialinė integracija

Organizacinės kultūros žinios

Žaismingumas — 0,076 — 0,076 — 0,068

Pasitenkinimas darbu

Identifikacija

-0,167 — 0,140 — 0,210

Internalizacija

Pasinėrimas — 0,159

Jautimasis tikruoju org. nariu

Ketinimas išeiti iš darbo — -0,160 — -0,186

0,151 — 0,190 — 0,247 — 0,127

Pasiekimas

Iššūkis — 0,399 → Darbinis stresas

Socializacijos kontekstas

Individualūs ir organizaciniai veiksniai

Sąveika su žaidybinimo elementais

Žaidiminės patirtys darbo aplinkoje

Socializacijos pasekmės

4 paveikslas. *Žaidiminių patirčių darbo aplinkoje prognostinė reikšmė socializacijos pasekmėms integraliame modelyje (brūkšninės linijos žymi nereikšmingą ryšį)*

- Su darbu susijusių išteklių aprūpinimas, aukštesnės kokybės santykiai su vadovu, taip pat – darbo aplinkos, kaip socialiai susietos,

žaismingos ir orientuotos į pasiekimus, suvokimas teigiamai prognozuoja naujoko organizacinės kultūros žinių duomenų išsibarstymą.

Toliau pateikiamos svarbiausios įžvalgos, susijusios su tolimosiomis socializacijos pasekmėmis (3–5 paveikslai):

- Aukštesnės kokybės santykiai su vadovu, ilgesnė darbo patirtis, aprūpinimas su darbu susijusiais ištekliais, darbo aplinkos suvokimas kaip socialiai susietos ar orientuotos į pasiekimus bei darbo atitiktis turimai specialybei paaiškina mažesnį naujokų ketinimą palikti darbą;
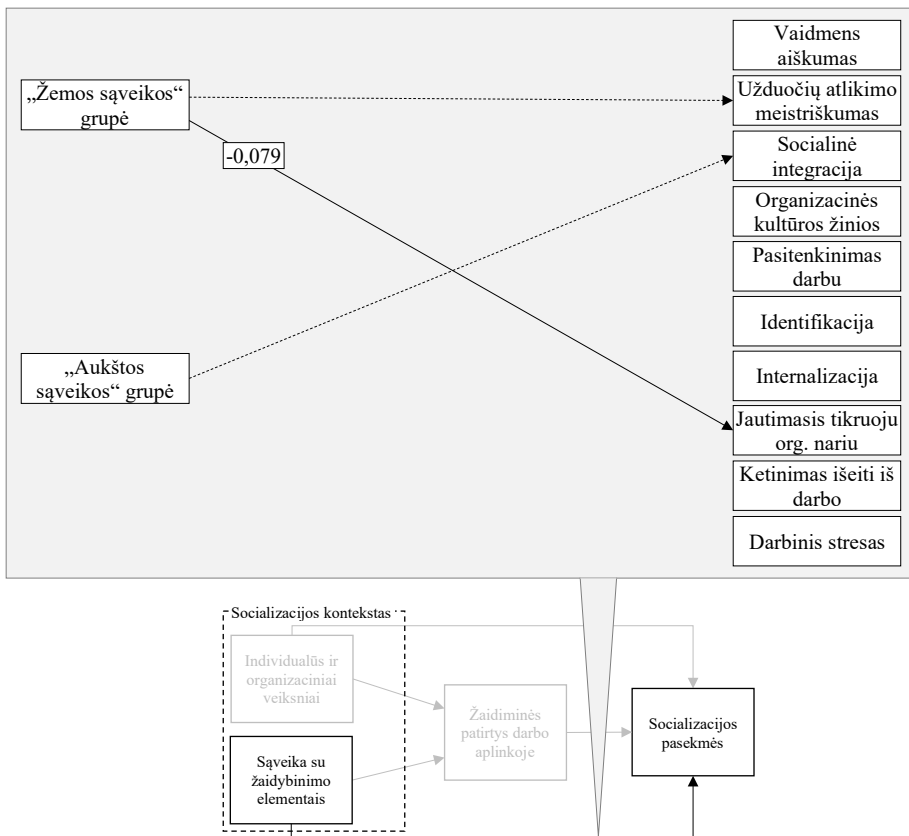
5 paveikslas. *Sąveikos su žaidybinimo elementais prognostinė reikšmė socializacijos pasekmėms integraliame modelyje (brūkšninė linija žymi nereikšmingą ryšį)*

- Naujų darbuotojų pasitenkinimą darbu labiausiai prognozuoja su darbu susijusių išteklių suteikimas. Be to, tokie veiksniai kaip

aukštesnės kokybės santykiai su vadovu, darbo atitiktis turimai specialybei, žaismingumo, socialinio susietumo ar aukštesnių pasiekimų skatinimo suvokimas darbo aplinkoje taip pat teigiamai prognozuoja šį kintamąjį;
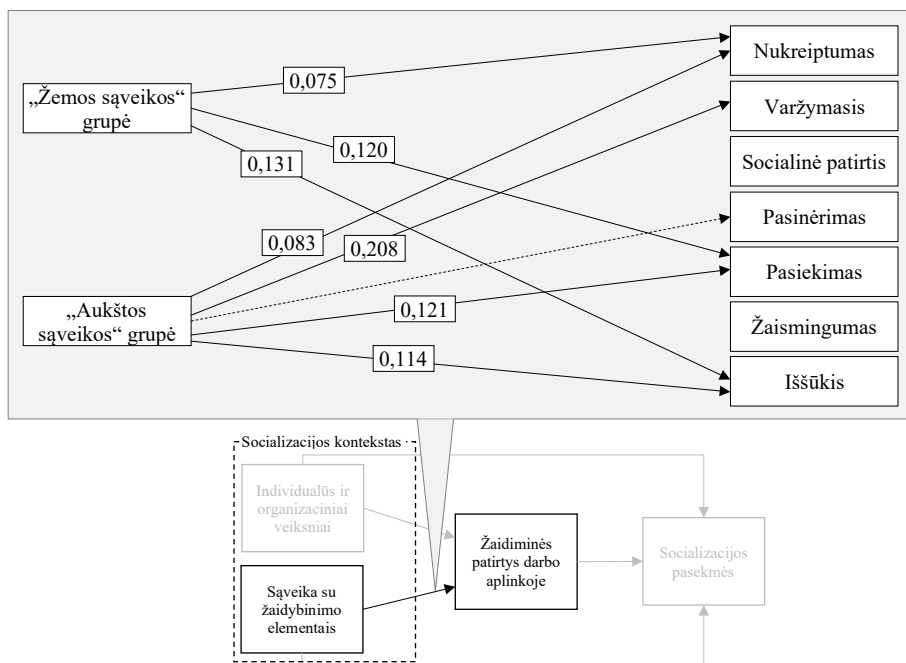
6 paveikslas. *Sąveikos su žaidybinimo elementais prognostinė reikšmė žaidiminėms patirtims darbo aplinkoje integraliame modelyje (brūkšninė linija žymi nereikšmingą ryšį)*

- Darbo aplinkos suvokimas kaip įtraukiančios, socialiai susietos ir į pasiekimus orientuotos, o taip pat vyresnis amžius bei aprūpinimas socializacijos resursais teigiamai prognozuoja abi įsipareigojimo organizacijai dimensijas – identifikaciją ir internalizaciją. Nauji darbuotojai, turintys universitetinį išsilavinimą, labiau perima organizacijos vertybes ir tikslus (internalizacija). Dabartinio darbo sutapimas su darbuotojų turima specialybe arba darbo aplinkos suvokimas kaip žaismingos paaiškina didesnio pasididžiavimo ir priklausymo organizacijai jausmą (identifikacija);
- Naujokų jautimąsi tikraisiais organizacijos nariais teigiamai prognozavo daugelis veiksnių: ilgesnė darbo organizacijoje trukmė, aprūpinimas su darbu susijusiais ištekliais, aukštesnės kokybės

santykiai su vadovu bei įtraukianti ir socialiai sutelkta darbo aplinka. Tačiau svarbu pabrėžti, kad mažesnio intensyvumo sąveika su žaidybinimo elementais neigiamai paaiškina darbuotojo jautimosi tikruoju organizacijos nariu duomenų sklaidą;

- Naujų darbuotojų patiriamą stresą labiausiai prognozavo darbo aplinka, kuri buvo suvokiama kaip kelianti iššūkių. Tačiau aukštesnės kokybės santykiai su vadovu, aprūpinimas su darbu susijusiais ištekliais ir į pasiekimus orientuota bei žaisminga darbo aplinka prognozavo mažesnį šio kintamojo raiškos lygį. Taip pat svarbu pažymėti, kad aukštesnis streso lygis buvo tų darbuotojų, kurie turi universitetinį išsilavinimą ir organizacijoje dirba ilgesnį laikotarpį.
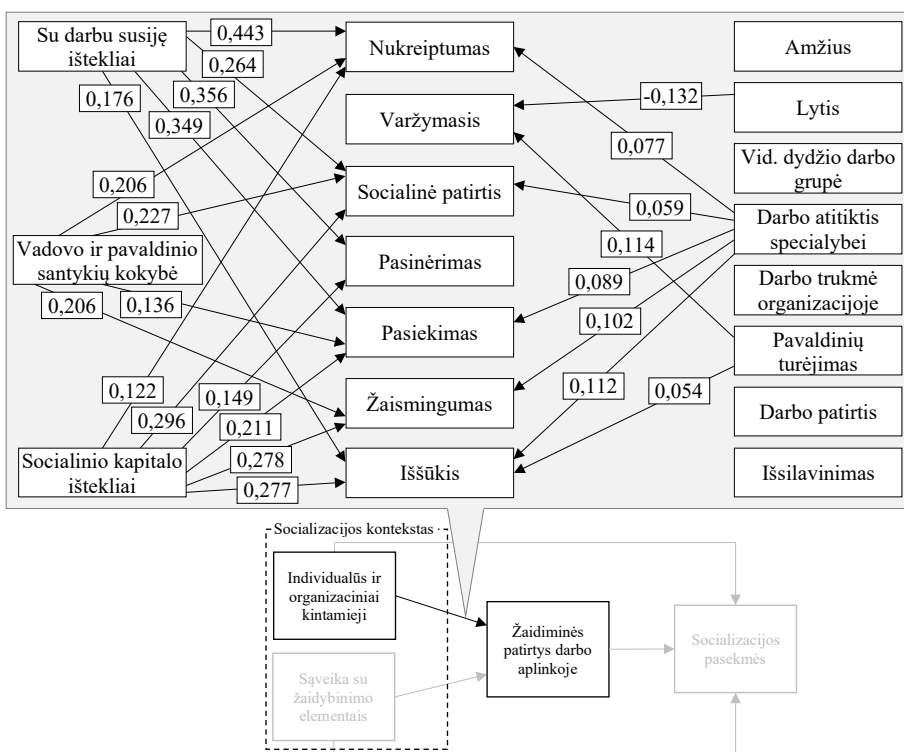
7 paveikslas. *Individualių ir organizacinių kintamųjų prognostinė reikšmė žaidiminėms patirtims integraliame modelyje*

Galiausiai svarbu paminėti veiksnius, paaiškinančius žaidiminių patirčių dimensijų pasiskirstymą (6–7 paveikslai). Socializacijos ištekliai, aukštesnės kokybės santykiai su vadovu ir darbo atitiktis specialybei prognozuoja didžiausią šių kintamųjų dalį. To negalima pasakyti apie darbo aplinkos

suvokimą kaip konkurencingos, nes ši dimensija buvo paaiškinama tik lyties ir pareigybės tipo – vyrai ir darbuotojai, turintys pavaldžių asmenų, savo darbe patyrė daugiau su varžymusi susijusių dalykų. Skirtingai nei socializacijos pasekmės, sąveika su žaidybinimo elementais yra reikšmingesnė žaidiminėms patirtims kurti. Ši sąveika (ypač kai ji intensyvesnė) yra susijusi su darbo aplinkos suvokimu kaip kryptingos ir orientuotos į pasiekimus, tačiau kartu ir kaip keliančios iššūkių ir skatinančios varžytis.

IŠVADOS

1. Tyrimo rezultatai rodo, kad vertintų kintamųjų (socializacijos konteksto (įskaitant žaidybinimo elementus), žaidiminių patirčių darbo aplinkoje ir socializacijos pasekmių) tarpusavio sąsajų modelis pasižymi pakankamomis tinkamumo parametrų reikšmėmis.

2. Bendrame socializacijos kontekste sąveika su žaidybinimo elementais nėra susijusi su nė viena iš artimųjų socializacijos pasekmių (vaidmens aiškumu, socialine integracija, užduočių atlikimo meistriškumu ir organizacinės kultūros žiniomis).

3. Bendrame socializacijos kontekste sąveika su žaidybinimo elementais nėra susijusi su dauguma tolimųjų socializacijos pasekmių (pasitenkinimu darbu, įsipareigojimu organizacijai, ketinimu palikti darbovietę, darbiniu stresu), išskyrus jautimąsi tikruoju organizacijos nariu: nauji darbuotojai, mažiau intensyviai sąveikaujantys su žaidybinimo elementais, yra labiau linkę jaustis pašaliečiais.

4. Bendrame socializacijos kontekste žaidybinimo elementai yra susiję tik su tam tikromis žaidiminių patirčių darbo aplinkoje dimensijomis: tiek žemo, tiek aukšto intensyvumo sąveika yra siejama su pasiekimo, nukreiptumo ir iššūkio dimensijomis, o tik aukšto intensyvumo sąveika – su varžymosi. Skirtingos žaidiminės patirtys darbo aplinkoje yra labiau susijusios su darbo aplinkos kintamaisiais (socializacijos ištekliais, santykiais su vadovu, darbo atitiktimi turimai specialybei) nei su žaidybinimo elementais.

5. Žaidiminės patirtys darbo aplinkoje, atsižvelgus į bendrą socializacijos kontekstą, prognozavo daugelį socializacijos pasekmių, išskyrus užduočių atlikimo meistriškumą:
   - Nukreiptumo dimensija teigiamai prognozavo vaidmens aiškumą;
   - Socialinės patirties dimensija prognozavo socialinę integraciją teigiamai, o varžymosi – neigiamai;
   - Socialinės patirties, žaismingumo ir pasiekimo dimensijos teigiamai prognozavo organizacinės kultūros žinias;

- Socialinės patirties, pasiekimo ir pasinėrimo dimensijos teigiamai prognozavo internalizaciją;
- Socialinės patirties, pasiekimo, žaismingumo ir pasinėrimo dimensijos teigiamai prognozavo identifikaciją;
- Socialinės patirties ir pasiekimo dimensijos neigiamai prognozavo ketinimą išeiti iš darbo;
- Socialinės patirties, žaismingumo ir pasiekimo dimensijos teigiamai prognozavo pasitenkinimą darbu;
- Žaismingumo ir pasiekimo dimensijos neigiamai prognozavo darbinį stresą, o iššūkio – teigiamai;
- Socialinės patirties ir pasinėrimo dimensijos teigiamai prognozavo jautimąsi tikruoju organizacijos nariu.

REFERENCES

Adkins, C. L. (1995). Previous work experience and organizational socialization: A longitudinal examination. *Academy of Management Journal*, *38*(3), 839–862. https://www.jstor.org/stable/256748

Algashami, A., Vuillier, L., Alrobai, A., Phalp, K., & Ali, R. (2019). Gamification risks to enterprise teamwork: Taxonomy, management strategies and modalities of application. *Systems*, *7*(1), 1–30. doi: https://doi.org/10.3390/systems7010009

Allen, D. G. (2006). Do organizational socialization tactics influence newcomer embeddedness and turnover? *Journal of Management*, *32*(2), 237–256. https://doi.org/10.1177/0149206305280103

Amir, B., & Ralph, P. (2014). Proposing a theory of gamification effectiveness. In *ICSE Companion 2014: Companion Proceedings of the 36th International Conference on Software Engineering* (pp. 626–627). The Association for Computing Machinery. https://doi.org/10.1145/2591062.2591148

Ashford, S. J., & Black, J. S. (1996). Proactivity during organizational entry: The role of desire for control. *Journal of Applied Psychology, 81*(2), 199–214. https://doi.org/10.1037/0021-9010.81.2.199

Ashford, S. J., & Cummings, L. L. (1983). Feedback as an individual resource: Personal strategies of creating information. *Organizational Behavior & Human Performance, 32*(3), 370–398. https://doi.org/10.1016/0030-5073(83)90156-3

Ashford, S., & Nurmohamed, S. (2012). From past to present and into the future: A hitchhiker's guide to the socialization literature. In C. R. Wanberg (Ed.), *The Oxford handbook of organizational socialization* (pp. 8–24). Oxford University Press.

Ashforth, B. E. (2001). *Role transitions in organizational life: An identity-based perspective.* Lawrence Erlbaum Associates Publishers.

Ashforth, B. E. (2012). The role of time in socialization dynamics. In C. R. Wanberg (Ed.), *The Oxford handbook of organizational socialization* (pp. 161–186). Oxford University Press.

Bai, S., Hew, K. F., & Huang, B. (2020). Does gamification improve student learning outcome? Evidence from a meta-analysis and synthesis of qualitative data in educational contexts. *Educational Research Review*, *30*, Article 100322. https://doi.org/10.1016/j.edurev.2020.100322

Bailey, D. E., Dailey, S. L., Leonardi, P., Nardi, B., & Diniz, E. H. (2017). Socializing remote workers: Identification and role innovation at a distance. In S. Taneja (Ed.), *Academy of Management Proceedings*, *2015*(1). http://doi.org/10.5465/ambpp.2015.18612abstract

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, *22*(3), 309–328. https://doi.org/10.1108/02683940710733115

Bakker, A. B., Scharp, Y. S., Breevaart, K., & de Vries, J. D. (2020). Playful work design: Introduction of a new concept. *The Spanish Journal of Psychology*, *23*, Article e19. https://doi.org/10.1017/SJP.2020.20

Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman and Company.

Basit, A., Hassan, Z., Omar, N., Sethu, S., & Zaman, N. (2021). Gamification: A tool to enhance employee engagement and performance. *Turkish Online Journal of Qualitative Inquiry*, *12*(5), 3251–3269. https://www.tojqi.net/index.php/journal/article/view/2901/1933

Bauer, T. N., & Erdogan, B. (2012). Organizational socialization outcomes: Now and into the future. In C. R. Wanberg (Ed.), *The Oxford handbook of organizational socialization* (pp. 97–112). Oxford University Press.

Bauer, T. N., & Green, S. G. (1998). Testing the combined effects of newcomer information seeking and manager behavior on socialization. *Journal of Applied Psychology*, *83*(1), 72–83. https://doi.org/10.1037/0021-9010.83.1.72

Bauer, T. N., Bodner, T., Erdogan, B., Truxillo, D. M., & Tucker, J. S. (2007). Newcomer adjustment during organizational socialization: A meta-analytic review of antecedents, outcomes, and methods. *Journal of Applied Psychology*, *92*(3), 707–721. https://doi.org/10.1037/0021-9010.92.3.707

Bauer, T. N., Erdogan, B., Caughlin, D., Ellis, A. M., & Kurkoski, J. (2021). Jump-starting the socialization experience: The longitudinal role of day 1 newcomer resources on adjustment. *Journal of Management*, *47*(8), 2226–2261. https://doi.org/10.1177/0149206320962835

Bauer, T. N., Morrison, E. W., & Callister, R. R. (1998). Organizational socialization: A review and directions for future research. In G. R. Ferris (Ed.), *Research in personnel and human resources management*, Vol. 16, pp. 149–214. Elsevier Science/JAI Press.

Bell, L., Toorn, C. V., & Isaias, P. (2020). The use of gamification to increase engagement and other intrinsic factors with work integrated learning participants during new hire onboarding: An organisational case study. In *ACIS 2020 Proceedings*. https://aisel.aisnet.org/acis2020/97

Berger, C. R., & Calabrese, R. J. (1975). Some explorations in initial interaction and beyond: Toward a developmental theory of interpersonal communication. *Human Communication Research*, *1*(2), 99–112. https://doi.org/10.1111/j.1468-2958.1975.tb00258.x

Booysen, N. (2022). *An examination of the psychometric properties of the gameful experience questionnaire (GAMEFULQUEST) in an online training environment* (Master's thesis, University of Stellenbosch).

https://scholar.sun.ac.za/items/c4e44293-f5c7-42b2-b525-d087961774c0

Boswell, W. R., Shipp, A. J., Payne, S. C., & Culbertson, S. S. (2009). Changes in newcomer job satisfaction over time: Examining the pattern of honeymoons and hangovers. *Journal of Applied Psychology, 94*(4), 844–858. https://doi.org/10.1037/a0014975

Bravo, M. J., Peiró, J. M., Rodriguez, I., & Whitely, W. T. (2003). Social antecedents of the role stress and career-enhancing strategies of newcomers to organizations: A longitudinal study. *Work & Stress, 17*(3), 195–217. https://doi.org/10.1080/02678370310001625658

Brull, S., Finlayson, S., Kostelec, T., MacDonald, R., & Krenzischeck, D. (2017). Using gamification to improve productivity and increase knowledge retention during orientation. *JONA: The Journal of Nursing Administration*, *47*(9), 448–453. http://doi.org/10.1097/NNA.0000000000000512

Buchanan, B. (1974). Building organizational commitment: The socialization of managers in work organizations. *Administrative Science Quarterly*, *19*(4), 533–546. https://doi.org/10.2307/2391809

Burns, K. A. (2019). *The integration of a mobile pervasive game in the new employee onboarding process* (Doctoral dissertation, University of Alabama). http://ir.ua.edu/handle/123456789/6647

Capitano, J., Mishra, V., Selvarathinam, P., Collins, A., & Crossett, A. (2021). How long are newcomers new in different occupations? *Organization Management Journal*, *19*(3), 110–123. https://doi.org/10.1108/OMJ-10-2020-1054

Cardador, M. T., Northcraft, G. B., & Whicker, J. (2017). A theory of work gamification: Something old, something new, something borrowed, something cool? *Human Resource Management Review, 27*(2), 353–365. https://doi.org/10.1016/j.hrmr.2016.09.014

Chao, G. T. (2012). Organizational socialization: Background, basics, and a blueprint for adjustment at work. In S. W. J. Kozlowski (Ed.), *The Oxford handbook of organizational psychology*, Vol. 1, pp. 579–614. Oxford University Press.

Chao, G. T., O'Leary-Kelly, A. M., Wolf, S., Klein, H. J., & Gardner, P. D. (1994). Organizational socialization: Its content and consequences. *Journal of Applied Psychology, 79*(5), 730–743. https://doi.org/10.1037/0021-9010.79.5.730

Chillakuri, B. (2020). Understanding Generation Z expectations for effective onboarding. *Journal of Organizational Change Management*, *33*(7), 1277–1296. https://doi.org/10.1108/JOCM-02-2020-0058

Cooper-Thomas, H., & Anderson, N. (2002). Newcomer adjustment: The relationship between organizational socialization tactics, information

acquisition and attitudes. *Journal of Occupational and Organizational Psychology, 75*(4), 423–437. https://doi.org/10.1348/096317902321119583

Dai, L. & Chen, Y. (2015). A systematic review of perceived insider status. *Journal of Human Resource and Sustainability Studies*, *3*(2), 66–72. https://doi.org/10.4236/jhrss.2015.32010

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499–512. https://doi.org/10.1037/0021-9010.86.3.499

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: defining "gamification". In A. Lugmayr, H. Franssila, C. Safran, & I. Hammouda (Eds.), *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments* (pp. 9–15). The Association for Computing Machinery. https://doi.org/10.1145/2181037.2181040

Douglas, B. D., Ewell, P. J., & Brauer, M. (2023). Data quality in online human-subjects research: Comparisons between MTurk, Prolific, CloudResearch, Qualtrics, and SONA. PLOS ONE, *18*(3), Article e0279720. https://doi.org/10.1371/journal.pone.0279720

Dymek, M. (2018). Expanding the magic circle – gamification as a marketplace icon. *Consumption Markets & Culture*, *21*(6), 590–602. https://doi.org/10.1080/10253866.2017.1361153

Dzimidienė A., & Bagdžiūnienė, D. (2015). Darbuotojų socializacijos, darbinio ir pilietinio elgesio bei tapatumo organizacijai sąsajos. *Psichologija*, *51*, 29–43. https://doi.org/10.15388/Psichol.2015.51.8254

Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I. L., & Rhoades, L. (2002). Perceived supervisor support: Contributions to perceived organizational support and employee retention. *Journal of Applied Psychology, 87*(3), 565–573. https://doi.org/10.1037/0021-9010.87.3.565

Ellis, A. M., Bauer, T. N., & Erdogan, B. (2015a). New-employee organizational socialization: Adjusting to new roles, colleagues, and organizations. In J. E. Grusec & P. D. Hastings (Eds.), *Handbook of socialization: Theory and research* (pp. 301–322). The Guilford Press.

Ellis, A. M., Bauer, T. N., Mansfield, L. R., Erdogan, B., Truxillo, D. M., & Simon, L. S. (2015b). Navigating uncharted waters: Newcomer socialization through the lens of stress theory. *Journal of Management, 41*(1), 203–235. https://doi.org/10.1177/0149206314557525

Eppmann, R., Bekk, M., & Klein, K. (2018). Gameful experience in gamification: Construction and validation of a gameful experience scale [GAMEX]. *Journal of interactive marketing*, *43*(1), 98–115. https://doi.org/10.1016/j.intmar.2018.03.002

Feldman, D. C. (1976). A practical program for employee socialization. *Organizational Dynamics*, *5*(2), 64–80. https://doi.org/10.1016/0090-2616(76)90055-3

Forsyth, D. R. (2019). *Group dynamics* (7th Edition). Cengage.

Frögéli, E., Annell, S., Rudman, A., Inzunza, M., & Gustavsson, P. (2022). The importance of effective organizational socialization for preventing stress, strain, and early career burnout: An intensive longitudinal study of new professionals. *International Journal of Environmental Research and Public Health*, *19*(12), Article 7356. https://doi.org/10.3390/ijerph19127356

Frögéli, E., Jenner, B., & Gustavsson, P. (2023). Effectiveness of formal onboarding for facilitating organizational socialization: A systematic review. *PLOS ONE*, *18*(2), Article e0281823. https://doi.org/10.1371/journal.pone.0281823

George, D., & Mallery, P. (2019*). IBM SPSS statistics 26 step by step: A simple guide and reference*. Routledge.

Gerdenitsch, C., Sellitsch, D., Besser, M., Burger, S., Stegmann, C., Tscheligi, M., & Kriglstein, S. (2020). Gamification at work: Effects on work enjoyment and productivity and the role of leadership responsibilities. *Electronic Commerce Research and Applications*, *43*, Article 100994. https://doi.org/10.1016/j.elerap.2020.100994

Gerstner, C. R., & Day, D. V. (1997). Meta-Analytic review of leader–member exchange theory: Correlates and construct issues. *Journal of Applied Psychology, 82*(6), 827–844. https://doi.org/10.1037/0021-9010.82.6.827

Girdauskienė, L., Čiplytė, E., & Navickas, V. (2022). Gamification as an innovative instrument for employee engagement. *Marketing and Management of Innovations*, *1*, 10–17. https://doi.org/10.21272/mmi.2022.1-01

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The Leadership Quarterly*, *6*(2), 219–247. https://doi.org/10.1016/1048-9843(95)90036-5

Gregg, M. (2011). *Work's intimacy*. Polity.

Gruman, J. A., Saks, A. M., & Zweig, D. I. (2006). Organizational socialization tactics and newcomer proactive behaviors: An integrative study. *Journal of Vocational Behavior*, *69*(1), 90–104. https://doi.org/10.1016/j.jvb.2006.03.001

Hamari, J. (2017). Do badges increase user activity? A field experiment on the effects of gamification. *Computers in Human Behavior, 71,* 469–478. https://doi.org/10.1016/j.chb.2015.03.036

Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work? A literature review of empirical studies on gamification. In *Proceedings of*

the 47th Annual Hawaii International Conference on System Sciences (pp. 3025–3034). IEEE. https://doi.org/10.1109/HICSS.2014.377

Hammedi, W., Thomas, L., Poncin, I., & Alkire, L. (2021). Uncovering the dark side of gamification at work: Impacts on engagement and well-being. *Journal of Business Research*, *122*, 256–269. https://doi.org/10.1016/j.jbusres.2020.08.032

Hamza, I., & Tóvölgyi, S. (2022). Empirical analysis of the influence of of gamification on employees' behaviour. *Dynamic Relationships Management Journal*, *11*(2), 71–78. http://dx.doi.org/10.17708/DRMJ.2022.v11n02a05

Heimburger, L., Buchweitz, L., Gouveia, R., & Korn, O. (2020). Gamifying onboarding: How to increase both engagement and integration of new employees. In R. Goossens & A. Murata (Eds.) *Advances in Social and Occupational Ergonomics* (pp. 3–14). Springer. http://doi.org/10.1007/978-3-030-20145-6_1

Högberg, J., Hamari, J. & Wästlund, E. (2019). Gameful experience questionnaire (GAMEFULQUEST): An instrument for measuring the perceived gamefulness of system use. *User Modeling and User-Adapted Interaction*, *29*, 619–660. https://doi.org/10.1007/s11257-019-09223-w

Holzer, A., Kocher, B., Bendahan, S., Cardia, I. V., Mazuze, J., & Gillet D. (2020). Gamifying knowledge sharing in humanitarian organisations: A design science journey. *European Journal of Information Systems*, *29*(2), 153–171. https://doi.org/10.1080/0960085X.2020.1718009

Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *The Electronic Journal of Business Research Methods*, *6*(1), 53–60. https://doi.org/10.21427/D7CF7R

Hopkins, J., & Bardoel, A. (2023). The future is hybrid: How organisations are designing and supporting sustainable hybrid work models in post-pandemic Australia. *Sustainability*, *15*(4), Article 3086. https://doi.org/10.3390/su15043086

Huang, B., Hew, K. F., & Lo, C. K. (2018). Investigating the effects of gamification-enhanced flipped learning on undergraduate students' behavioral and cognitive engagement. *Interactive Learning Environments*, *27*(8), 1106–1126. https://doi.org/10.1080/10494820.2018.1495653

Huotari, K., & Hamari, J. (2012). Defining gamification: A service marketing perspective. In A. Lugmayr, H. Franssila, J. Paavilainen, & H. Kärkkäinen (Eds.), *Proceedings of the 16th International Academic MindTrek Conference 2012: Envisioning Future Media Environments* (pp. 17–22). The Association for Computing Machinery. https://doi.org/10.1145/2393132.2393137

Huotari, K., & Hamari, J. (2017). A definition for gamification: Anchoring gamification in the service marketing literature. *Electronic Markets*, *27*, 21–31. https://doi.org/10.1007/s12525-015-0212-z

Hurrell, J. J. (2011). Occupational stress. In L. S. Baron, R. K. Sokas, B. S. Levy, & D. H. Wegman (Eds.), *Occupational and Environmental Health: Recognizing and Preventing Disease and Injury* (pp. 296–312). Lippincott Williams & Wilkins.

Hussain, S., Qazi, S., Ahmed, R., Streimikiene, D. & Vveinhardt, J. (2018). Employees management: Evidence from gamification techniques. *Montenegrin Journal of Economics*, *14*(4), 97–107. https://doi.org/10.14254/1800-5845/2018.14-4.7

Jedel, I., & Palmquist, A. (2021). Factors related to the use and perception of a gamified application for employee onboarding. In T. Ahram, R. Taiar, & F. Groff (Eds.), *Proceedings of the 4th International Conference on Human Interaction and Emerging Technologies: Future Applications (IHIET – AI 2021), April 28-30, 2021, Strasbourg, France* (pp. 653–661). Springer.

Johnson, C., Bailey, S. K. T., & Mercado, A. (2020). Does gamification work? Analyzing effects of game features on learning in an adaptive scenario-based trainer. In R. A. Sottilare & J. Schwarz, *Adaptive Instructional Systems. Second International Conference, AIS 2020, Held as Part of the 22nd HCI International Conference, HCII 2020, Copenhagen, Denmark, July 19–24, 2020, Proceedings* (pp. 493–504). Springer. https://doi.org/10.1007/978-3-030-50788-6_36

Jokisaari, M. (2013). The role of leader-member and network relations in newcomers' role performance. *Journal of Vocational Behavior*, *82*(2), 96–104. https://doi.org/10.1016/j.jvb.2013.01.002

Jokisaari, M., & Nurmi, J.-E. (2009). Change in newcomers' supervisor support and socialization outcomes after organizational entry. *Academy of Management Journal*, *52*(3), 527–544. https://doi.org/10.5465/AMJ.2009.41330971

Jones, G. R. (1986). Socialization tactics, self-efficacy, and newcomers' adjustments to organizations. *Academy of Management Journal, 29*(2), 262–279. https://www.jstor.org/stable/256188

Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction – job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127*(3), 376–407. https://doi.org/10.1037/0033-2909.127.3.376

Kammeyer-Mueller, J. D., & Wanberg, C. R. (2003). Unwrapping the organizational entry process: Disentangling multiple antecedents and their pathways to adjustment. *Journal of Applied Psychology*, *88*(5), 779–794. https://doi.org/10.1037/0021-9010.88.5.779

Kashive, N., & Mohite, S. (2023). Use of gamification to enhance e-learning experience. *Interactive Technology and Smart Education*, *20*(4), 554–575. https://doi.org/10.1108/ITSE-05-2022-0058

Katz, R. (1980). Time and work: Toward an integrative perspective. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (pp. 81–127). JAI Press.

Kaufman, L., & Rousseeuw, P. J. (1990). *Finding groups in data: An introduction to cluster analysis.* John Wiley & Sons.

Khodabandelou, R., Roghanian, P., Gheysari, H., & Amoozegar, A. (2023). A systematic review of gamification in organizational learning. *The Learning Organization*, *30*(2), 251–272. https://doi.org/10.1108/TLO-05-2022-0057

Klein, H. J., & Heuser, A. E. (2008). The learning of socialization content: A framework for researching orientating practices. In J. J. Martocchio (Ed.) *Research in Personnel and Human Resources Management*, Vol. 27, pp. 279–336. Emerald Group Publishing Limited.

Klein, H. J., & Polin, B. (2012). Are organizations on board with best practices onboarding? In C. R. Wanberg (Ed.), *The Oxford handbook of organizational socialization* (pp. 267–287). Oxford University Press.

Klein, H. J., & Weaver, N. A. (2000). The effectiveness of an organizational-level orientation training program in the socialization of new hires. *Personnel Psychology, 53*(1), 47–66. https://doi.org/10.1111/j.1744-6570.2000.tb00193.x

Koivisto, J., & Hamari, J. (2019). The rise of the motivational information systems: A review of gamification research. *International Journal of Information Management*, *45*, 191–210. https://doi.org/10.1016/j.ijinfomgt.2018.10.013

Koivisto, J., & Hamari, J. (2014). Demographic differences in perceived benefits from gamification. *Computers in Human Behavior*, *35*, 179–188. https://doi.org/10.1016/j.chb.2014.03.007

Korte, R. (2010). 'First, get to know them': A relational view of organizational socialization. *Human Resource Development International*, *13*(1), 27–43. https://doi.org/10.1080/13678861003588984

Kram, K. E. (1983). Phases of the mentor relationship. *Academy of Management Journal, 26*(4), 608–625. https://www.jstor.org/stable/255910

Kramer, M. W. (2010). *Organizational socialization: joining and leaving organizations*. Polity Press.

Kramer, M. W., & Miller, V. D. (1999). A response to criticisms of organizational socialization research: In support of contemporary conceptualizations of organizational assimilation. *Communication Monographs*, *66*(4), 358–367. https://doi.org/10.1080/03637759909376485

Krath, J., Schürmann, L., & von Korflesch, H. F. O (2021). Revealing the theoretical basis of gamification: A systematic review and analysis of theory in research on gamification, serious games and game-based learning. *Computers in Human Behavior*, *125*, Article 106963. https://doi.org/10.1016/j.chb.2021.106963

Landers, R. N., & Marin, S. (2021). Redesigning job tasks and work itself through workplace gamification: A review, research agenda, and recommendations for practice. In M. Vesa (Ed.), *Organizational Gamification: Theories and Practices of Ludified Work in Late Modernity* (pp. 63–89). Routledge.

Landers, R. N., Tondello, G. F., Kappen, D. L., Collmus, A. B., Mekler, E. D., & Nacke, L. E. (2019). Defining gameful experience as a psychological state caused by gameplay: Replacing the term 'Gamefulness' with three distinct constructs. *International Journal of Human-Computer Studies, 127,* 81–94. https://doi.org/10.1016/j.ijhcs.2018.08.003

Lapointe, É., Vandenberghe, C., & Boudrias, J.-S. (2014). Organizational socialization tactics and newcomer adjustment: The mediating role of role clarity and affect-based trust relationships. *Journal of Occupational and Organizational Psychology, 87*(3), 599–624. https://doi.org/10.1111/joop.12065

Larson, K. (2020). Serious games and gamification in the corporate training environment: A literature review. *Organizational Training and Performance*, *64*, 319–328. https://doi.org/10.1007/s11528-019-00446-7

Leclercq, T., Poncin, I., & Hammedi, W. (2020). Opening the black box of gameful experience: Implications for gamification process design. *Journal of Retailing and Consumer Services*, *52*, Article 101882. https://doi.org/10.1016/j.jretconser.2019.07.007

Lee, X., Yang, B., & Li, W. (2017). The influence factors of job satisfaction and its relationship with turnover intention: Taking early-career employees as an example. *Anales de Psicología*, *33*(3), 697–707. https://dx.doi.org/10.6018/analesps.33.3.238551

Lier, L. M., & Breuer, C. (2019). The motivating power of gamification: Does the inclusion of game elements increase the effectiveness of worksite health promotion programs? *International Journal of Workplace Health Management*, *13*(1), 1–15. https://doi.org/10.1108/IJWHM-04-2019-0055

Linden, R. C., Bauer, T. N., & Erdogan, B. (2004). The role of leader-member exchange in the dynamic relationship between employee and employer: Implications for employee socialization, leaders, and organizations. In J. Coyle-Shapiro, L. Shore, S. Taylor, & L. Tetric (Eds.), *The employment relationship: Examining psychological and contextual perspectives* (pp. 226–252). Oxford University Press.

Liu P., Zhang Y., Ji Y., & Wu, S. (2021). Threat upon entry: Effect of coworker ostracism on newcomers' proactive behaviors during organizational socialization. *Frontiers in Psychology*, *12*, Article 545478. https://doi.org/10.3389/fpsyg.2021.545478

Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.) *Handbook of Industrial and Organizational Psychology* (pp. 1297–1349). Rand McNally.

Louis, M. R. (1990). Acculturation in the workplace: Newcomers as lay ethnographers. In B. Schneider (Ed.), *Organizational climate and culture* (pp. 85-129). Jossey-Bass.

Luca, M. R. (2016). Organisational socialization in the context of career path changes. *Bulletin of the Transilvania University of Brasov. Series VII: Social Sciences and Law*, *9*(58), 9–16. https://webbut.unitbv.ro/index.php/Series_VII/article/view/3792

Major, D. A., Kozlowski, S. W. J., Chao, G. T., & Gardner, P. D. (1995). A longitudinal investigation of newcomer expectations, early socialization outcomes, and the moderating effects of role development factors. *Journal of Applied Psychology*, *80*(3), 418–431. https://doi.org/10.1037/0021-9010.80.3.418

Major, D. A., Turner, J. E., & Fletcher, T. D. (2006). Linking proactive personality and the Big Five to motivation to learn and developmental activity. *Journal of Applied Psychology*, *91*(4), 927–935. doi: https://doi.org/10.1037/0021-9010.91.4.927

Marcatto, F., Di Blas, L., Luis, O., Festa, S., & Ferrante, D. (2022). The Perceived Occupational Stress Scale: A brief tool for measuring workers' perceptions of stress at work. *European Journal of Psychological Assessment, 38*(4), 293–306. https://doi.org/10.1027/1015-5759/a000677

Marczewski, A. (2015). *Even ninja monkeys like to play: Gamification, game thinking & motivational design.* Gamified UK.

Mattke, J., & Maier, C. (2021). Gamification: Explaining brand loyalty in mobile applications. *AIS Transactions on Human-Computer Interaction*, *13*(1), 62–81. https://doi.org/10.17705/1thci.00142

McShane, S. L., Tasa, K., & Steen, S. L. (2021). *Canadian organizational behaviour* (11th ed.). McGraw Hill.

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, *1*(1), 61–89. https://doi.org/10.1016/1053-4822(91)90011-Z

Miller, V. D., & Jablin, F. M. (1991). Information seeking during organizational entry: Influences, tactics, and a model of the process. *The Academy of Management Review, 16*(1), 92–120. https://doi.org/10.2307/258608

Mobley, W. H., Griffeth, R. W., Hand, H. H., & Meglino, B. M. (1979). Review and conceptual analysis of the employee turnover process. *Psychological Bulletin, 86*(3), 493–522. https://doi.org/10.1037/0033-2909.86.3.493

Morrison, E. W. (1993). Newcomer information seeking: Exploring types, modes, sources, and outcomes. *Academy of Management Journal*, *36*(3), 557–589. https://www.jstor.org/stable/256592

Morrison, E. W. (2002). Information seeking within organizations. *Human Communication Research*, *28*(2), 229–242. https://doi.org/10.1111/j.1468-2958.2002.tb00805.x

Nacke, L. E., & Deterding, S. (2017). The maturing of gamification research. *Computers in Human Behavior*, *71*, 450–454. https://doi.org/10.1016/j.chb.2016.11.062

Nah, F.-H. F., Eschenbrenner, B., Claybaugh, C., & Koob, P. (2019). Gamification of enterprise systems. *Systems*, *7*(1), 13. https://doi.org/10.3390/systems7010013

Nyström, T. (2021). Exploring the darkness of gamification: You want it darker? In K. Arai (Ed.) *Intelligent Computing. Lecture Notes in Networks and Systems*, Vol. 285, pp. 491–506. Springer. https://doi.org/10.1007/978-3-030-80129-8_35

O'Reilly, C. A., & Chatman, J. (1986). Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology*, *71*(3), 492–499. https://doi.org/10.1037/0021-9010.71.3.492

Obaid, I., Farooq, M. S., & Abid, A. (2020). Gamification for recruitment and job training: Model, taxonomy, and challenges. *IEEE Access*, *8*, 65164–65178. https://doi.org/10.1109/ACCESS.2020.2984178

Oppenheimer, D. M., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of Experimental Social Psychology*, *45*(4), 867–872. https://doi.org/10.1016/j.jesp.2009.03.009

Oprescu, F., Jones, C., & Katsikitis, M. (2014). I PLAY AT WORK – Ten principles for transforming work processes through gamification. *Frontiers in Psychology, 5,* Article 14. https://doi.org/10.3389/fpsyg.2014.00014

Park, T.-Y., & Shaw, J. D. (2013). Turnover rates and organizational performance: A meta-analysis. *Journal of Applied Psychology, 98*(2), 268–309. https://doi.org/10.1037/a0030723

Pereira, V., Behl, A., Jayawardena, N., Laker, B., Dwivedi, Y. K., & Bhardwaj, S. (2022). The art of gamifying digital gig workers: A theoretical assessment of evaluating engagement and motivation. *Production Planning & Control*, 1–17. https://doi.org/10.1080/09537287.2022.2083524

Raftopoulos, M., Walz, S., & Greuter, S. (2015). How enterprises play: Towards a taxonomy for enterprise gamification. In S. Björk, A. Waern, & M. Fuchs (Eds.), *Proceedings of the 2015 DiGRA International Conference: Diversity of Play, DiGRA 2015, Lüneburg, Germany, May 14-17, 2015.* Digital Games Research Association.

Raišienė, A. G., Gečienė, J., & Gruodė, K. (2019). Kaip „jie" tampa „mes": naujų darbuotojų socializacijos veiksniai. *Socialinis ugdymas*. *51*(1), 46–60. https://doi.org/10.15823/su.2019.51.4

Ramadhan, B. T. S., & Irawanto, D. W. (2023). The effect of gamification on performance with the mediation of motivation and employee engagement. *The International Journal of Social Sciences World*, *5*(2), 141–158. https://doi.org/10.5281/zenodo.8253905

Rink, F., Kane, A. A., Ellemers, N., & van der Vegt, G. (2013). Team receptivity to newcomers: Five decades of evidence and future research themes. *The Academy of Management Annals*, *7*(1), 247–293. https://doi.org/10.1080/19416520.2013.766405

Saks, A. M., & Gruman J. A. (2012). Getting newcomers on board: A review of socialization practices and introduction to socialization resources theory. In Wanberg C. R. (Ed.), *The Oxford handbook of organizational socialization* (pp. 27–55). Oxford University Press.

Schmidt, C. V. H., Manske, J., & Flatten, T. C. (2023). Experience matters: The mediating role of gameful experience in the relationship between gamified competition and perceived innovation culture. *Creativity and Innovation Management*, *32*(4), 551–567. https://doi.org/10.1111/caim.12572

Schöbel, S., Janson, A., & Söllner, M. (2020). Capturing the complexity of gamification elements: A holistic approach for analysing existing and deriving novel gamification designs. *European Journal on Information Systems (EJIS)*, *29*(6), 641–668. https://doi.org/10.1080/0960085X.2020.1796531

Schweizer, K. (2010). Some guidelines concerning the modeling of traits and abilities in test construction [Editorial]. *European Journal of Psychological Assessment*, *26*(1), 1–2. https://doi.org/10.1027/1015-5759/a000001

Setia, M. (2023). Cross-sectional studies. In A. Nichols & J. Edlund (Eds.), *The Cambridge handbook of research methods and statistics for the social and behavioral sciences. Volume 1: Building a program of research* (pp. 269–291). Cambridge University Press. http://doi.org/10.1017/9781009010054.014

Silic, M., & Lowry, P. B. (2020). Using design-science based gamification to improve organizational security training and compliance. *Journal of Management Information Systems*. *37*(1). 129–161. https://doi.org/10.1080/07421222.2019.1705512

Silic, M., Marzi, G., Caputo, A., & Bal, P. M. (2020). The effects of a gamified human resource management system on job satisfaction and engagement. *Human Resource Management Journal*, *30*(2), 260–277. https://doi.org/10.1111/1748-8583.12272

Sinha, J. B. P. (2008). *Culture and Organization Behaviour*. SAGE Publications India.

Spector, P. E. (2019). Do not cross me: Optimizing the use of cross-sectional designs. *Journal of Business and Psychology*, *34*(2), 125–137. https://doi.org/10.1007/s10869-018-09613-8

Stamper, C. L., & Masterson, S. S. (2002). Insider or outsider? How employee perceptions of insider status affect their work behavior. *Journal of Organizational Behavior, 23*(8), 875–894. https://doi.org/10.1002/job.175

Stanculescu, L. C., Bozzon, A., Sips, R.-J., & Houben, G.-J. (2016). Work and play: An experiment in enterprise gamification. In *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing* (pp. 346–58). The Association for Computing Machinery. https://doi.org/10.1145/2818048.2820061

Stenros, J. (2014). Behind games: Playful mindsets and transformative practices. In S. P. Walz & S. Deterding (Eds.), *The gameful world: Approaches, issues, applications*. The MIT Press

Taormina, R. J. (1997). Organizational socialization: A multidomain, continuous process model. *International Journal of Selection and Assessment*, *5*(1), 29–47. https://doi.org/10.1111/1468-2389.00043

Teas, R. K., Wacker, J. G., & Hughes, R. E. (1979). A path analysis of causes and consequences of salespeople's perceptions of role clarity. *Journal of Marketing Research*, *16*(3), 355–369. https://doi.org/10.1177/002224377901600308

Tilcsik, A. (2014). Imprint–environment fit and performance: How organizational munificence at the time of hire affects subsequent job performance. *Administrative Science Quarterly, 59*(4), 639–668. https://doi.org/10.1177/0001839214549042

Tondello, G. F., Mora A., & Nacke, L. E. (2017). Elements of gameful design emerging from user preferences. In *CHI PLAY'17: Proceedings of the Annual Symposium on Computer-Human Interaction in Play* (pp. 129–142). https://doi.org/10.1145/3116595.3116627

Tunçgenç, B., Travers, E., & Fairhurst, M. T. (2021) Leadership and tempo perturbation affect coordination in medium-sized groups. *Scientific Reports*, *11*, Article 4940. https://doi.org/10.1038/s41598-021-81504-0

Vahlo, J., Tuuri, K., & Välisalo, T. (2022). Exploring gameful motivation of autonomous learners. *Frontiers in Psychology*, *13*, Article 825840. https://doi.org/10.3389/fpsyg.2022.825840

Van Maanen, J., & Schein, E. H. (1979). Toward a theory of organizational socialization. In B. M. Staw (Ed.), *Research in Organizational Behavior* (pp. 209–264). JAI Press.

Vidyarthi, P. R., Liden, R. C., Anand, S., Erdogan, B., & Ghosh, S. (2010). Where do I stand? Examining the effects of leader–member exchange social comparison on employee work behaviors. *Journal of Applied Psychology, 95*(5), 849–861. https://doi.org/10.1037/a0020033

Wanberg, C. R. (2012). Facilitating organizational socialization: An introduction. In C. R. Wanberg (Ed.), *The Oxford handbook of organizational socialization* (pp. 17–21). Oxford University Press.

Wanberg, C. R., & Kammeyer-Mueller, J. D. (2000). Predictors and outcomes of proactivity in the socialization process. *Journal of Applied Psychology, 85*(3), 373–385. https://doi.org/10.1037/0021-9010.85.3.373

Wanous, J. P. (1992). *Organizational entry: Recruitment, selection, and socialization of newcomers* (2nd ed.). Addison-Wesley Publishing Company.

Werbach, K. (2014). (Re)defining gamification: A process approach. In A. Spagnolli & L. Chittaro (Eds.), *PERSUASIVE 2014: Proceedings of the 9th International Conference on Persuasive Technology* (pp. 266–272). Springer. https://doi.org/10.1007/978-3-319-07127-5_23

Werbach, K., & Hunter, D. (2012). *For the win: How game thinking can revolutionize your business*. Wharton Digital Press.

Wolf, T., Weiger, W. H., & Hammerschmidt, M. (2018). Gamified digital services: How gameful experiences drive continued service usage. In *51st Hawaii International Conference on System Sciences, HICSS 2018. Proceedings* (pp. 1187–1196). https://doi.org/10.24251/HICSS.2018.147

Xi, N., & Hamari, J. (2020). Does gamification affect brand engagement and equity? A study in online brand communities. *Journal of Business Research*, *109*, 449–460. https://doi.org/10.1016/j.jbusres.2019.11.058

Zainuddin, Z., Chu, S. K. W., Shujahat, M., & Perera, C. J. (2020). The impact of gamification on learning and instruction: A systematic review of empirical evidence. *Educational Research Review*, *30*, Article 100326. https://doi.org/10.1016/j.edurev.2020.100326

Zhou, L., & Wang, M. (2016). Leader-member exchange and newcomer adjustment. In T. N. Bauer & B. Erdogan (Eds.), *The Oxford handbook of leader-member exchange* (pp. 227–239). Oxford University Press.

Zhou, L., Park, J., Kammeyer-Mueller, J. D., Shah, P. P., & Campbell, E. M. (2022). Rookies connected: Interpersonal relationships among newcomers, newcomer adjustment processes, and socialization outcomes. *Journal of Applied Psychology*, *107*(3), 370–388. https://doi.org/10.1037/apl0000894

Ziesemer, A., Müller, L., & Silveira, M. (2013). Gamification aware: Users perception about game elements on non-game context. In B. S. da Silva, S. D. J. Barbosa, T. U. Conte, & T. H. C. de Castro (Eds.), *Proceedings of the 12th Brazilian Symposium on Human Factors in Computing Systems – IHC 2013* (pp. 276–279). Brazilian Computer Society.

Žukauskaitė, I., & Bagdžiūnienė, D. (2012). Informacijos įgijimo skirtumai tarp mentorius turėjusių ir jų neturėjusių naujų darbuotojų. *International Journal of Psychology: A biopsychosocial approach*, *10*, 9–26. https://eltalpykla.vdu.lt/1/31986

APPENDICES

Appendix 1. *Summary of participants' individual and organizational characteristics*

Variable name		N (%)
Gender	Male	282 (49.0%)
	Female	293 (51.0%)
Education	Bachelor's degree and higher	362 (63.0%)
	Associate's degree	29 (5.0%)
	Some college/no degree	122 (21.2%)
	High school / GED	62 (10.8%)
Country	The United States of America	98 (17.04%)
	The United Kingdom	477 (82.96%)
Work Experience	More than ten years	273 (47.5%)
	5-10 years	140 (24.3%)
	1-5 years	132 (23.0%)
	Less than one year	30 (5.2%)
Initial Job Status	First job	24 (4.2%)
	Not first job	551 (95.8%)
Additional Work	No additional commitments	453 (78.8%)
	With additional commitments	122 (21.2%)
Job-Specialization Match	Unmatched specialization	170 (29.6%)
	Matched specialization	405 (70.4%)
Workload Status	Part-time	130 (22.6%)
	Full-time	445 (77.4%)
Manager Status	Without subordinates	409 (71.1%)
	With subordinates	166 (28.9%)
Work Location Type	Primarily remote	202 (35.1%)
	Hybrid	63 (11.0%)
	Primarily in-person	310 (53.9%)
Occupational Area	IT	86 (14.69%)
	Customer service	75 (13.04%)
	Education	66 (11.48%)
	Finance	47 (8.17%)
	Sales	47 (8.17%)
	Healthcare	41 (7.13%)
	Administration	30 (5.22%)
	Human resource management	30 (5.22%)
	Manufacturing	23 (4.00%)
	Marketing	20 (6.348%)
	Social services	17 (2.96%)
	Other	93 (16.18%)

Appendix 2. *Custom-designed measurement items for this study (created by the thesis author)*

Socialization resources

Social capital resources

1. I took part in formal events where I was able to meet and get to know other members of the organization.
2. At the beginning of my work, my supervisor was always available when I needed help.
3. I had the opportunity to meet and get to know other members of the organization.
4. At the beginning of my work, I always received help from my new colleagues.

Work-related resources

5. I was given all the tools I needed to do my job.
6. I was told what my job objectives and expectations were.
7. I received training that gave me the knowledge and skills I needed for the job.
8. The tasks I was given coincided with my job description.
9. At the beginning of my work, my colleagues shared useful information related to the job.
10. I always received clear and timely feedback on how I was doing in my new job.
11. At the beginning of my job, I received positive recognition and/or encouragement for a job well done.

Gameful experience in the work environment

Playfulness

1. My work environment allows me to be spontaneous.
2. My work environment allows me to use my imagination.
3. My work environment allows me to be playful.

Accomplishment

4. My work environment encourages me to strive for the best results.
5. My work environment motivates me to make progress and improve.
6. My work environment inspires me to maintain high work standards.

Guidance

7. My work environment creates an impression that I am directed towards the right direction.
8. My work environment helps me understand what I should aim for.
9. My work environment helps me understand when I am doing something correctly or incorrectly.

Challenge

10. My work environment pushes me to test myself to the maximum.
11. My work environment encourages me to step out of my comfort zone.
12. My work environment challenges me.

Competition

13. My work environment creates a feeling that I have to win against others.
14. My work environment creates a feeling that I need to outdo others.
15. My work environment encourages me to view others as competitors.

Immersion

16. My work environment captures my attention as if I don't see anything else around me.
17. My work environment makes me forget about my daily worries temporarily.
18. My work environment emotionally engages me.

Social experience

19. My work environment allows me to feel like a part of this organization's community.
20. My work environment allows me to feel that I'm not alone.
21. My work environment creates a feeling that I can share with others what I want to.

Organizational culture knowledge

1. I am confident that I know what values my organization is guided by.
2. I am confident that I know what behavioral norms exist in my organization.
3. I am confident that I know what relationships exist among members of this organization.
4. I am certain of how innovative my organization is.
5. I am certain how each part of this organization contributes to achieving common goals.
6. I am sure what results or achievements are valued in this organization.
7. I am certain of what my organization's long-term goals and objectives are.

Turnover intentions

1. I often think about quitting my current job.
2. I will most likely be looking for a new job in the next year.
3. At the first opportunity, I will leave this job.

Appendix 3. *Intergroup comparison of gameful experience in the work environment dimensions among individual and organizational variables*

	Playfulness	Social Experience	Guidance	Immersion	Competition	Challenge	Accomplish-ment
Gender				M (SD)			
Male	9.29	10.43	10.45	8.51	6.57	10.26	10.83
(N = 282)	(2.93)	(2.71)	(2.51)	(2.69)	(3.28)	(2.89)	(2.68)
Female	8.99	10.54	10.73	8.49	5.58	9.98	11.05
(N = 293)	(3.11)	(2.96)	(2.75)	(2.97)	(2.94)	(3.22)	(3.06)
t(573)	1.180	-.436	-1.276	.082	3.817	1.120	-.921
p	.238	.663	.203	.935	<.001	.263	.357
Education				M (SD)			
Non-degree holders	8.97	10.49	10.42	8.68	6.14	10.04	10.85
(N = 184)	(3.25)	(2.94)	(2.86)	(2.95)	(3.34)	(3.14)	(2.95)
Degree holders	9.21	10.48	10.67	8.42	6.03	10.15	10.98
(N = 391)	(2.91)	(2.8)	(2.52)	(2.77)	(3.06)	(3.03)	(2.85)
t(573)	-.886	.054	-1.035	1.049	.411	-.392	-.490
p	.376	.957	.301	.295	.681	.695	.624
Country				M (SD)			
The United Kingdom	9.23	10.50	10.54	8.49	5.99	10.10	10.86
(N = 477)	(3.02)	(2.81)	(2.59)	(2.84)	(3.11)	(3.10)	(2.86)
The United States of	8.67	10.43	10.78	8.56	6.38	10.18	11.29
America (N = 97)	(2.98)	(2.96)	(2.80)	(2.77)	(3.29)	(2.89)	(2.95)
t(573)	1.665	.217	-.809	-.218	-1.123	-.238	-1.347
p	.096	.829	.419	.827	.262	.812	.179
Work experience				M (SD)			
Work experience (<10	9.03	10.41	10.56	8.38	6.26	10.07	10.97
years) (N = 302)	(2.98)	(2.77)	(2.45)	(2.77)	(3.15)	(3.01)	(2.83)
Work experience (10+	9.25	10.57	10.63	8.64	5.84	10.17	10.91
years) (N = 273)	(3.07)	(2.91)	(2.83)	(2.89)	(3.13)	(3.13)	(2.94)
t(573)	-.883	-.692	-.318	-1.072	1.623	-.414	.243
p	.377	.489	.750	.284	.105	.679	.808
Initial job status				M (SD)			
First job	8.54	10.13	10.38	8.54	6.21	10.04	10.63
(N = 24)	(3.19)	(3.34)	(2.58)	(3.12)	(3.22)	(3.10)	(2.72)
Not first job	9.16	10.50	10.60	8.50	6.06	10.12	10.95
(N = 551)	(3.01)	(2.82)	(2.64)	(2.82)	(3.15)	(3.07)	(2.89)
t(573)	-.984	-.635	-.407	.066	.232	-.122	-.545
p	.326	.526	.684	.947	.817	.903	.586
Additional work				M (SD)			
No additional	9.03	10.47	10.53	8.50	6.10	10.12	10.90
commitments (N = 453)	(3.07)	(2.87)	(2.66)	(2.85)	(3.18)	(3.09)	(2.89)
With additional	9.54	10.54	10.80	8.52	5.93	1.09	11.07
commitments (N = 122)	(2.83)	(2.73)	(2.52)	(2.75)	(3.04)	(2.97)	(2.87)

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t(573)	-1.672	-.244	-.971	-.089	.506	.107	-.581
p	.095	.807	.332	.929	.613	.915	.561

Job-specialization match — M (SD)

Unmatched specialization (N = 170)	8.20 (3.16)	9.67 (3.07)	9.88 (2.76)	8.04 (3.01)	6.09 (3.23)	9.20 (3.24)	10.12 (3.21)
Matched specialization (N = 405)	9.53 (2.88)	10.83 (2.67)	10.89 (2.52)	8.70 (2.73)	6.05 (3.11)	10.50 (2.91)	11.28 (2.66)
t(573)	-4.906	-4.534	-4.269	-2.555	.155	-4.731	-4.502
p	<.001	<.001	<.001	.011	.877	<.001	<.001

Workload status — M (SD)

Part-Time (N = 130)	8.93 (3.19)	10.30 (3.02)	10.42 (2.85)	8.76 (2.78)	5.56 (2.97)	9.32 (3.09)	10.69 (2.99)
Full-Time (N = 445)	9.20 (2.97)	10.54 (2.78)	10.64 (2.57)	8.43 (2.84)	6.21 (3.18)	10.35 (3.02)	11.01 (2.85)
t(573)	-.879	-.845	-.819	1.178	-2.069	-3.385	-1.110
p	.380	.398	.413	.239	.039	<.001	.267

Manager status — M (SD)

Without subordinates (N = 409)	9.03 (3.03)	10.38 (2.82)	10.61 (2.58)	8.39 (2.84)	5.75 (3.01)	9.94 (3.06)	10.93 (2.81)
With subordinates (N = 166)	9.40 (3.00)	10.74 (2.86)	10.52 (2.78)	8.78 (2.80)	6.84 (3.34)	10.56 (3.03)	10.94 (3.06)
t(573)	-1.325	-1.410	.379	-1.507	-3.804	-2.219	-.003
p	.186	.159	.704	.132	<.001	.027	.997

Work location type — M (SD)

Primarily remote (N = 202)	9.40 (2.67)	10.54 (2.59)	10.82 (2.48)	8.40 (2.73)	5.86 (3.01)	10.14 (2.99)	11.27 (11.28)
Hybrid (N = 63)	9.17 (2.79)	10.41 (2.54)	10.20 (2.51)	8.49 (2.41)	6.57 (3.45)	9.69 (2.67)	10.66 (1.67)
Primarily in-person (N = 310)	8.95 (3.26)	10.47 (3.04)	10.51 (2.74)	8.57 (2.97)	6.08 (3.16)	10.18 (3.18)	10.77 (1.77)
F(2, 572)	1.340	.042	1.621	.229	1.226	.664	2.189
p	.263	.959	.199	.795	.294	.515	.113

Workgroup size — M (SD)

(A) Individual workers (N = 24)	9.50 (3.90)	8.87 (3.34)	10.04 (2.75)	9.20 (2.85)	6.33 (3.40)	9.33 (3.18)	10.58 (2.82)
(B) Small group (N = 201)	9.11 (3.01)	10.44 (2.85)	10.53 (2.74)	8.56 (2.90)	6.14 (3.06)	10.09 (3.09)	10.10 (3.05)
(C) Medium group (N = 202)	9.09 (2.88)	10.51 (2.72)	10.44 (2.46)	8.18 (2.64)	6.05 (3.27)	9.99 (2.95)	10.74 (2.71)
(D) Large group (N = 148)	9.16 (3.07)	10.76 (2.82)	10.94 (2.67)	8.75 (2.93)	5.91 (3.05)	10.43 (3.14)	11.20 (2.87)
F(3, 571)	1.243	24.698	1.247	14.112	2.309	11.139	7.183
p	.939	.026	.219	.152	.874	.314	.459
Bonferroni (p <.05)		C > A D > A					

Appendix 4. *Intergroup comparison of proximal socialization outcomes among individual and organizational variables*

	Role Clarity	Social Integration	Task Mastery	Organizational Culture Knowledge
Gender	M (SD)			
Male	22.94	24.49	22.77	26.23
(N = 282)	(4.13)	(5.27)	(4.18)	(5.22)
Female	22.87	24.78	23.10	25.88
(N = 293)	(4.56)	(5.74)	(4.36)	(5.98)
$t(573)$	.181	-.628	-.915	.747
p	.856	.530	.361	.456
Education	M (SD)			
Non-degree holders	23.24	25.01	23.21	26.40
(N = 184)	(4.47)	(5.77)	(4.52)	(5.65)
Degree holders	22.74	24.46	22.81	25.89
(N = 391)	(4.29)	(5.38)	(4.14)	(5.61)
$t(573)$	1.293	1.118	1.051	1.014
p	.196	.264	.294	.311
Country	M (SD)			
The United Kingdom	22.88	24.82	22.97	26.06
(N = 477)	(4.18)	(23.73)	(4.22)	(5.45)
The United States of America	22.98	23.73	22.74	26.03
(N = 97)	(5.12)	(5.87)	(4.47)	(6.38)
$t(573)$	-.218	1.728	.494	.048
p	.828	.075	.621	.961
Work experience	M (SD)			
Work experience (<10 years)	23.05	24.41	23.01	26.26
(N = 302)	(3.95)	(5.12)	(4.25)	(5.32)
Work experience (10+ years)	22.74	24.89	22.86	25.82
(N = 273)	(4.76)	(5.91)	(4.29)	(5.93)
$t(573)$	.871	-1.034	.437	.939
p	.384	.302	.662	.348
Initial job status	M (SD)			
First job	22.17	22.58	21.67	26.29
(N = 24)	(3.85)	(5.89)	(5.04)	(6.12)
Not first job	22.93	24.73	22.99	26.05
(N = 551)	(4.37)	(5.48)	(4.23)	(5.60)
$t(573)$	-0.846	-1.868	-1.493	.210
p	.398	.062	.136	.834
Additional work	M (SD)			
No additional commitments	22.89	24.71	22.88	26.02
(N = 453)	(4.40)	(5.53)	(4.32)	(5.75)
With additional commitments	22.93	24.37	23.15	26.20
(N = 122)	(4.19)	(5.46)	(4.10)	(5.14)

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t(573)	-.091	.604	-.607	-.330
p	.928	.546	.544	.741
Job-specialization match	M (SD)			
Unmatched specialization	22.54	23.46	22.48	24.44
(N = 170)	(4.10)	(5.45)	(4.48)	(5.65)
Matched specialization	23.06	25.13	23.13	26.74
(N = 405)	(4.45)	(5.47)	(4.17)	(5.47)
t(573)	-1.312	-3.349	-1.665	-4.557
p	.190	.001	.097	<.001
Workload status	M (SD)			
Part-Time	23.63	24.81	23.30	25.75
(N = 130)	(4.22)	(5.73)	(4.26)	(5.38)
Full-Time	22.69	24.59	22.83	26.15
(N = 445)	(4.37)	(5.45)	(4.27)	(5.69)
t(573)	2.175	.402	1.096	-.714
p	.030	.688	.274	.476
Manager status	M (SD)			
Without subordinates	23.05	24.60	22.96	26.10
(N = 409)	(4.28)	(5.41)	(4.30)	(5.45)
With subordinates	22.54	24.73	22.89	25.93
(N = 166)	(4.52)	(5.77)	(4.20)	(6.02)
t(573)	1.266	-0.273	0.170	0.348
p	.206	.785	.865	.728
Work location type	M (SD)			
Primarily remote	22.63	24.49	22.62	26.07
(N = 202)	(4.14)	(5.24)	(4.25)	(5.23)
Hybrid	22.62	24.92	23.41	25.48
(N = 63)	(3.82)	(4.39)	(3.71)	(5.13)
Primarily in-person	23.14	24.67	23.05	26.16
(N = 310)	(4.58)	(5.89)	(4.38)	(5.96)
F(2, 572)	.963	.162	1.040	.390
p	.382	.851	.354	.677
Workgroup size	M (SD)			
(A) Individual workers	24.38	22.00	23.58	23.58
(N = 24)	(3.94)	(5.36)	(3.99)	(5.44)
(B) Small group	22.94	24.68	23.25	25.99
(N = 201)	(4.24)	(5.25)	(4.25)	(5.94)
(C) Medium group	22.24	24.38	22.67	25.92
(N = 202)	(4.43)	(5.62)	(4.29)	(5.24)
(D) Large group	23.53	25.36	22.77	26.73
(N = 148)	(4.34)	(5.63)	(4.32)	(5.62)
F(3, 571)	3.554	2.874	.883	2.323
p	.014	.036	.449	.074
Bonferroni (p <.05)	C < D	A < D		

Appendix 5. *Intergroup comparison of distal socialization outcomes among individual and organizational variables*

	Job Satisfaction	Identification	Internalization	Occupational Stress	Turnover Intentions	Organizational Insider Status
Gender	M (SD)					
Male	6.61	9.53	14.76	10.68	7.02	5.44
(N = 282)	(1.86)	(2.96)	(4.77)	(4.28)	(3.82)	(2.11)
Female	6.87	9.58	15.38	10.63	7.16	5.43
(N = 293)	(1.85)	(3.02)	(4.91)	(4.14)	(3.97)	(2.37)
t(573)	-.603	-.208	-1.536	.151	-.439	.051
p	.546	.835	.125	.880	.661	.959
Education	M (SD)					
Non-degree holders	6.98	9.34	14.36	10.03	6.67	5.60
(N = 184)	(2.11)	(3.15)	(4.83)	(4.24)	(3.88)	(2.35)
Degree holders	6.87	9.66	15.40	10.95	7.29	5.35
(N = 391)	(1.95)	(2.91)	(4.83)	(4.17)	(3.89)	(2.19)
t(573)	.608	-1.200	-2.409	-2.453	-1.763	1.262
p	.543	.231	.016	.014	.078	.207
Country	M (SD)					
The United Kingdom	6.92	9.56	14.98	10.70	7.10	5.48
(N = 477)	(1.95)	(3.01)	(4.89)	(4.22)	(3.90)	(2.19)
The United States of	6.82	9.50	15.50	10.42	7.01	5.16
America (N = 97)	(2.24)	(2.85)	(4.60)	(4.11)	(3.85)	(2.46)
t(573)	.450	.199	-.961	.591	.224	1.300
p	.653	.842	.337	.555	.823	.194
Work experience	M (SD)					
Work experience (<10	6.76	9.39	14.93	10.78	7.69	5.42
years) (N = 302)	(2.01)	(2.88)	(4.88)	(4.12)	(3.89)	(2.16)
Work experience (10+	7.08	9.74	15.23	10.52	6.43	5.44
years) (N = 273)	(1.99)	(3.09)	(4.82)	(4.30)	(3.80)	(2.33)
t(573)	-1.909	-1.415	-0.732	0.743	3.925	-0.121
p	.057	.158	.464	.458	<.001	.904
Initial job status	M (SD)					
First job	6.92	8.92	13.79	11.08	6.75	4.88
(N = 24)	(1.84)	(3.13)	(5.42)	(4.63)	(3.93)	(2.29)
Not first job	6.91	9.58	15.13	10.64	7.11	5.46
(N = 551)	(2.01)	(2.98)	(4.82)	(4.19)	(3.89)	(2.24)
t(573)	.018	-1.069	-1.322	.506	-.437	-1.242
p	.986	.285	.187	.613	.662	.215
Additional work	M (SD)					
No additional	6.90	9.48	14.97	10.77	7.03	5.45
commitments (N = 453)	(2.03)	(3.06)	(4.85)	(4.22)	(3.97)	(2.21)
With additional	6.95	9.83	15.46	10.25	7.31	5.38
commitments (N = 122)	(1.89)	(2.70)	(4.85)	(4.17)	(3.59)	(2.36)

t(573)	-.256	-1.138	-.995	1.193	-.706	-.091
p	.798	.256	.320	.233	.480	.764
Job-specialization match				M (SD)		
Unmatched	6.07	8.55	14.05	11.16	8.69	5.01
specialization (N = 170)	(2.32)	(3.07)	(4.89)	(4.53)	(4.01)	(2.31)
Matched specialization	7.26	9.98	15.50	10.45	6.42	5.61
(N = 405)	(1.74)	(2.85)	(4.77)	(4.05)	(3.64)	(2.19)
t(573)	-6.755	-5.335	-3.310	1.855	6.636	-2.968
p	<.001	<.001	.001	.064	<.001	.003
Workload status				M (SD)		
Part-Time	6.95	9.38	15.01	9.72	7.41	5.40
(N = 130)	(2.09)	(2.96)	(4.75)	(3.99)	(3.73)	(2.35)
Full-Time	6.90	9.60	15.09	10.93	7.00	5.44
(N = 445)	(1.98)	(3.00)	(4.88)	(4.23)	(3.94)	(2.21)
t(573)	.237	-.738	-.170	-2.921	1.056	-.181
p	.813	.461	.865	.004	.291	.857
Manager status				M (SD)		
Without subordinates	6.91	9.49	14.90	10.27	7.01	5.44
(N = 409)	(2.00)	(3.04)	(4.84)	(4.07)	(3.87)	(2.24)
With subordinates	6.90	9.70	15.49	11.61	7.28	5.40
(N = 166)	(2.01)	(2.86)	(4.85)	(4.39)	(3.95)	(2.26)
t(573)	.091	-.767	-1.333	-3.509	-0.756	.230
p	.927	.443	.183	<.001	.450	.819
Work location type				M (SD)		
Primarily remote	6.97	9.86	15.45	10.37	6.82	5.50
(N = 202)	(1.78)	(2.85)	(4.79)	(4.26)	(3.80)	(2.14)
Hybrid	7.16	9.89	15.17	10.62	6.32	5.13
(N = 63)	(1.62)	(2.85)	(4.61)	(3.78)	(3.69)	(2.14)
Primarily in-person	6.82	9.29	14.81	10.85	7.42	5.45
(N = 310)	(2.20)	(3.08)	(4.93)	(4.26)	(3.97)	(2.33)
F(2, 572)	.894	2.655	1.079	.799	2.870	.674
p	.410	.071	.341	.450	.057	.510
Workgroup size				M (SD)		
(A) Individual workers	6.83	9.46	14.00	10.21	6.83	5.83
(N = 24)	(2.16)	(2.78)	(5.03)	(3.67)	(3.70)	(2.60)
(B) Small group	6.88	9.46	15.11	10.63	7.16	5.38
(N = 201)	(2.17)	(3.00)	(4.75)	(4.32)	(3.95)	(2.26)
(C) Medium group	6.86	9.58	15.00	10.63	7.30	5.38
(N = 202)	(1.85)	(2.88)	(4.82)	(4.01)	(3.86)	(2.14)
(D) Large group	7.03	9.66	15.30	10.81	6.75	5.50
(N = 148)	(1.96)	(3.16)	(5.02)	(4.43)	(3.89)	(2.30)
F(3, 571)	.233	.134	.517	.163	.631	.367
p	.873	.940	.671	.921	.595	.777

Appendix 6. *Intergroup comparison of socialization outcomes and gameful experience dimensions among job tenure groups*

Variable	Job Tenure[*]				F (3, 571)	p	Bon-ferroni (p <.05)
	(A) 1–3 months	(B) 4–6 months	(C) 7–9 months	(D) 10–12 months			
	M (SD)						
Gameful experience							
Playfulness	8.64 (2.86)	9.21 (2.97)	9.46 (3.05)	9.01 (3.13)	1.814	.143	
Social Experience	10.33 (2.86)	10.27 (2.96)	10.84 (2.69)	10.35 (2.89)	1.457	.225	
Guidance	10.55 (2.69)	10.5 (2.57)	10.78 (2.63)	10.45 (2.66)	.535	.658	
Immersion	8.18 (2.79)	8.6 (2.77)	8.75 (2.77)	8.33 (3.00)	1.181	.316	
Competition	5.49 (3.03)	6.19 (2.96)	6.35 (3.32)	5.99 (3.14)	1.864	.135	
Challenge	9.82 (3.37)	9.88 (2.87)	10.48 (2.99)	10.09 (3.10)	1.514	.210	
Accomplishment	10.74 (3.15)	10.76 (2.76)	11.21 (2.78)	10.91 (2.91)	.926	.428	
Socialization outcomes							
Role Clarity	22.75 (4.67)	22.55 (4.53)	23.07 (4.38)	23.14 (3.87)	.592	.620	
Social Integration	24.26 (5.62)	23.73 (5.32)	25.17 (5.53)	25.12 (5.50)	2.401	.067	
Task Mastery	22.53 (4.69)	22.73 (4.42)	22.85 (4.01)	23.59 (4.09)	1.554	.200	
Organizational Culture Knowledge	26.18 (6.11)	25.90 (5.32)	26.73 (5.05)	25.19 (6.15)	2.070	.103	
Job Satisfaction	6.83 (2.20)	6.91 (1.84)	7.01 (2.00)	6.83 (2.02)	.276	.842	
Identification	9.36 (3.15)	9.58 (2.72)	9.62 (3.03)	9.59 (3.07)	.202	.895	
Internalization	14.84 (5.00)	15.35 (4.58)	15.15 (4.93)	14.86 (4.92)	.330	.803	
Occupational Stress	9.91 (4.44)	10.53 (3.81)	10.93 (4.22)	11.01 (4.35)	1.793	.147	
Turnover Intentions	6.94 (4.20)	7.14 (3.77)	6.97 (3.91)	7.33 (3.75)	.304	.823	
Organizational Insider Status	4.73 (2.43)	5.12 (2.22)	5.85 (2.08)	5.72 (2.16)	7.702	<.001	*A < C, A < D, B < C*

Note. [*]Group sizes: 1–3 months (N = 109), 4–6 months (N = 139), 7–9 months (N = 189), 10–12 months (N = 138)

Appendix 7. *The final model of statistically significant interrelationships between the study's variables (N = 575)*
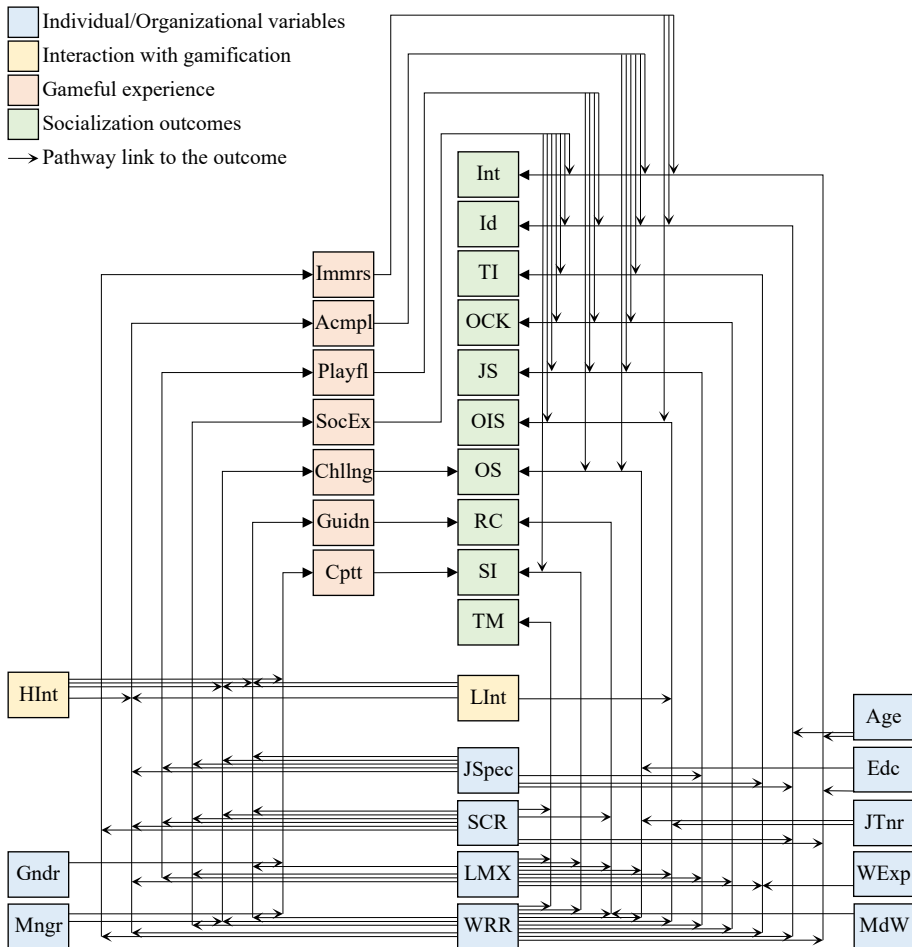
Abbreviations: Int (Internalization), Id (Identification), TI (Turnover Intentions), OCK (Organizational Culture Knowledge), JS (Job Satisfaction), OIS (Organizational Insider Status), OS (Occupational Stress), RC (Role Clarity), SI (Social Integration), TM (Task Mastery), Immrs (Immersion), Acmpl (Accomplishment), Playfl (Playfulness), SocEx (Social Experience), Chllng (Challenge), Guidn (Guidance), Cptt (Competition), HInt (Higher Interaction), LInt (Lower Interaction), Gndr (Gender), Mngr (Manager Status), JSpec (Job-Specialization Match), SCR (Social Capital Resources), WRR (Work-Related Resources), Edc (Education), JTnr (Job Tenure), WExp (Work Experience), MdW (Medium Workgroup)

Appendix 8. *Standardized path coefficients of direct effects (N = 575)*

Paths	β	LL	UL	p
Accomplishment → Identification	.151	.059	.243	<.001
Accomplishment → Internalization	.127	-.038	.292	.011
Accomplishment → Job Satisfaction	.190	.133	.247	<.001
Accomplishment → Occupational Stress	-.186	-.349	-.023	.001
Accomplishment → Org. Culture Knowledge	.247	.092	.402	<.001
Accomplishment → Turnover Intentions	-.160	-.293	-.027	.002
Age → Identification	.094	.078	.110	<.001
Age → Internalization	.096	.067	.125	.002
Challenge → Occupational Stress	.399	.264	.534	<.001
Competition → Occupational Stress	.058	-.032	.148	.093
Competition → Social Integration	-.111	-.221	-.001	<.001
Education → Internalization	.075	-.444	.594	.004
Education → Occupational Stress	.081	-.485	.647	.013
Gender → Competition	-.132	-.587	.323	<.001
Guidance → Role Clarity	.242	.120	.364	<.001
Guidance → Task Mastery	.014	-.143	.171	.773
Higher Interaction → Accomplishment	.121	-.249	.491	<.001
Higher Interaction → Challenge	.114	-.351	.579	.002
Higher Interaction → Competition	.208	-.302	.718	<.001
Higher Interaction → Guidance	.083	-.227	.393	.004
Higher Interaction → Immersion	.055	-.310	.420	.083
Higher Interaction → Social Integration	.061	-.664	.786	.058
Immersion → Identification	.140	.060	.220	<.001
Immersion → Internalization	.210	.065	.355	<.001
Immersion → Job Satisfaction	.063	.018	.108	.064
Immersion → Org. Insider Status	.159	.094	.224	<.001
Job Tenure → Occupational Stress	.084	.002	.166	.011
Job Tenure → Org. Insider Status	.156	.113	.199	<.001
Job Tenure → Task Mastery	.046	-.038	.130	.163
Job-Specialization Match → Accomplishment	.089	-.266	.444	.002
Job-Specialization Match → Challenge	.112	-.294	.518	<.001
Job-Specialization Match → Guidance	.077	-.227	.381	.005
Job-Specialization Match → Identification	.066	-.240	.372	.007
Job-Specialization Match → Job Satisfaction	.130	-.103	.363	<.001
Job-Specialization Match → Playfulness	.102	-.347	.551	.004
Job-Specialization Match → Social Experience	.059	-.274	.392	.034
Job-Specialization Match → Turnover Intentions	-.154	-.722	.414	<.001
LMX → Accomplishment	.136	.109	.163	<.001
LMX → Guidance	.206	.179	.233	<.001
LMX → Job Satisfaction	.150	.126	.174	<.001
LMX → Occupational Stress	-.224	-.285	-.163	<.001
LMX → Org. Culture Knowledge	.133	.068	.198	<.001
LMX → Org. Insider Status	.111	.080	.142	.007
LMX → Playfulness	.206	.165	.247	<.001
LMX → Role Clarity	.128	.075	.181	<.001
LMX → Social Experience	.227	.196	.258	<.001
LMX → Social Integration	.128	.052	.204	.002

Continued on the following page

LMX → Task Mastery	.197	.128	.266	<.001
LMX → Turnover Intentions	-.112	-.167	-.057	.008
Lower Interaction → Accomplishment	.120	-.256	.496	<.001
Lower Interaction → Challenge	.131	-.320	.582	<.001
Lower Interaction → Guidance	.075	-.243	.393	.006
Lower Interaction → Org. Insider Status	-.079	-.393	.235	.014
Lower Interaction → Task Mastery	-.058	-.666	.550	.072
Medium Workgroup → Role Clarity	-.066	-.497	.365	.007
Playfulness → Identification	.068	.013	.123	.017
Playfulness → Job Satisfaction	.076	.037	.115	.011
Playfulness → Occupational Stress	-.167	-.271	-.063	<.001
Playfulness → Org. Culture Knowledge	.076	-.040	.192	.017
Social Capital Resources → Accomplishment	.211	.137	.285	<.001
Social Capital Resources → Challenge	.277	.191	.363	<.001
Social Capital Resources → Guidance	.122	.059	.185	.006
Social Capital Resources → Identification	.099	.030	.168	.021
Social Capital Resources → Immersion	.149	.075	.223	.002
Social Capital Resources → Internalization	.120	-.007	.247	.013
Social Capital Resources → Playfulness	.278	.209	.347	<.001
Social Capital Resources → Role Clarity	-.200	-.296	-.104	<.001
Social Capital Resources → Social Experience	.296	.227	.365	<.001
Social Capital Resources → Task Mastery	-.191	-.314	-.068	<.001
Social Experience → Identification	.191	.091	.291	<.001
Social Experience → Internalization	.136	-.040	.312	.009
Social Experience → Job Satisfaction	.183	.122	.244	<.001
Social Experience → Org. Culture Knowledge	.204	.032	.376	<.001
Social Experience → Org. Insider Status	.252	.176	.328	<.001
Social Experience → Social Integration	.409	.244	.574	<.001
Social Experience → Turnover Intentions	-.182	-.319	-.045	<.001
Manager Status → Challenge	.054	-.295	.403	.042
Manager Status → Competition	.114	-.390	.618	.002
Work Experience → Turnover Intentions	-.100	-.541	.341	<.001
Work-Related Resources → Accomplishment	.349	.306	.392	<.001
Work-Related Resources → Challenge	.176	.125	.227	<.001
Work-Related Resources → Guidance	.443	.406	.480	<.001
Work-Related Resources → Identification	.180	.135	.225	<.001
Work-Related Resources → Immersion	.356	.313	.399	<.001
Work-Related Resources → Internalization	.129	.049	.209	.012
Work-Related Resources → Job Satisfaction	.207	.182	.232	<.001
Work-Related Resources → Occupational Stress	-.197	-.26	-.134	<.001
Work-Related Resources → Org. Culture Knowledge	.238	.167	.309	<.001
Work-Related Resources → Org. Insider Status	.167	.134	.200	<.001
Work-Related Resources → Role Clarity	.599	.534	.664	<.001
Work-Related Resources → Social Experience	.264	.225	.303	<.001
Work-Related Resources → Social Integration	.157	.081	.233	<.001
Work-Related Resources → Task Mastery	.375	.291	.459	<.001
Work-Related Resources → Turnover Intentions	-.142	-.201	-.083	.003

Note. Abbreviations: LL (Lower limit of the 95% confidence interval), UL (Upper limit of the 95% confidence interval), Org. (Organizational)

LIST OF PUBLICATIONS

Scientific articles

1. **Pečiūra, Ž.** (2023). Relationship between gameful experience in the workplace and employee socialization: A pilot study. In M. Bujić, P. DSouza, N. Xi, & J. Hamari (Eds.), *Proceedings of the 7th International GamiFIN Conference, Lapland, Finland, April 18–21, 2023* (pp. 13–24). CEUR Workshop Proceedings. https://ceur-ws.org/Vol-3405/paper2.pdf
2. **Pečiūra, Ž.** (2023). Can occupational stress be reduced by gamification? A study of newcomers. Psichologija, *69*, 8–26. https://doi.org/10.15388/Psichol.2023.69.1
3. **Pečiūra, Ž.**, & Žukauskaitė, I. (2024). A preliminary investigation of the relationship between gamification and organizational socialization outcomes: Does gamification live up to its expectations? *SAGE Open*, *14*(1). https://doi.org/10.1177/21582440231216524

Conference presentations

1. **Pečiūra, Ž.** (2020). Žaidybinimo taikymas naujų darbuotojų socializacijos procese [Application of gamification in the socialization process of new employees]. *XVIII Conference for Junior Scientists in Psychology, Vilnius, Lithuania.*
2. **Pečiūra, Ž.** (2023). Relationship between gameful experience in the workplace and employee socialization: A pilot study. *7th Annual International GamiFIN Conference, Lapland, Finland.*
3. **Pečiūra, Ž.** (2023). Darbuotojų socializacijos rodiklių ir patirties sąveikaujant su žaidybinimo elementais sąsajos [The relationship between employee socialization indicators and experiences in interaction with gamification elements]. *XX Conference for Junior Scientists in Psychology, Vilnius, Lithuania.*
4. **Pečiūra, Ž.**, & Žukauskaitė, I. (2023). Getting Serious About Fun: The Role of Gamification in Organizational Socialization. 21st EAWOP Congress. *The future is now: The changing world of work, Katowice, Poland.*

ABOUT THE AUTHOR

Žigimantas Pečiūra prepared his dissertation in 2019–2023 at the Institute of Psychology at Vilnius University. The author has presented his dissertation results in peer-reviewed scientific articles as well as at international and national conferences. His areas of interest are related to the application of gamification in organizational contexts. Throughout his professional practice, Žigimantas Pečiūra has primarily specialized in the areas of employee selection, development of selection instruments, and assessment of employee competencies. He has also contributed to various educational software development projects, incorporating aspects of gamification, and lectured on the subject of organizational behavior.

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