

IMPORTANCE OF INTEGRATING PLAY FOR WORKPLACE CULTURE

Industry report

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Culture Hero

EXECUTIVE SUMMARY

Culture Hero, a Melbourne-based leader in creative culture design, led by Dara Simkin partnered with RMIT University's researchers Dr. Argho Bandyopadhyay, Associate Professor Janneke Blijlevens, and Jo S.Y.Wong to investigate how play influences meaningful workplace outcomes. While global organisations increasingly use play to strengthen sense of belonging, and problem-solving, most insights into its effectiveness to date have been anecdotal or of qualitative nature. What has been missing is rigorous, evidence-based quantitative insights that explain that *play works* and *which* behavioural outcomes it meaningfully enhances. This evidence gap directly informs the core research question tackled in this research: *Does the integration of play in the workplace lead to measurable improvements in critical workplace outcomes?* To address this research question, this project generated empirical data to determine whether and *how* play enhances four key behavioural workplace culture drivers: sense of belonging, work engagement, learning adaptability, and sense of producing innovative solutions.

This research project was undertaken in three stages. Stage 1 involved a comprehensive review of academic literature to clarify what play is, identify its key typologies, and describe what currently is known about the key outcomes and how they are affected by play. These insights informed the development of a conceptual model that shaped the empirical stages. Stage 2 involved investigating the effect of play within a controlled online lab-based environment with 127 student participants to isolate the effects of playfulness on key workplace culture outcomes. Stage 3 tested these effects in real organisational settings through a workplace field experiment involving 98 employees across four companies, each randomly assigned to play-based or non-play collaborative workshops, followed by a five-week post-follow-up survey to assess the sustainability of the behavioural changes observed in the workplace.

The results across both the controlled lab study and the workplace field experiment were clear and consistent. In a controlled lab environment, participants who experienced their activities as playful reported significantly higher work engagement, a stronger sense of belonging, greater confidence in adapting to new challenges, and a heightened sense of producing innovative solutions. The field experiment reinforced these effects: employees in the play workshop demonstrated measurable improvements from pre-to-post-workshop, with anticipated sense of belonging increasing by 6.3%, anticipated work engagement by 14.5%, and anticipated learning adaptability by 6.4%. However, sense of producing innovative solutions improved across both play and non-play groups, likely due to the solution-focused nature of the task. Unfortunately, these benefits were of a short-term nature. Follow-up results showed that five weeks after the workshop, participants' responses had largely returned to their pre-workshop levels, indicating that while play creates immediate positive impact, sustaining these effects likely depends on continued integration of play into everyday work practices.

Building on these outcomes, this project closes a long-standing evidence gap by showing that the benefits of play are not just felt, they can be measured. This matters deeply for Culture Hero as for years, Dara Simkin and her team have witnessed first-hand how play helps people connect, collaborate, and think differently. The findings generated from this project now give clear evidence to what has long been understood in practice. With these insights, Culture Hero is better positioned to show organisations why play works, to influence how leaders think about workplace culture, and to expand its mission of bringing curiosity, creativity, and human-centered design into everyday work. Ultimately, the data reinforces a simple truth at the heart of Culture Hero's philosophy: play is not a nice-to-have, it is a powerful driver of meaningful and lasting workplace culture.

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INTRODUCTION

At first glance, the idea of integrating play at work might sound a little odd. Work, after all, is supposed to be serious, a place for focus, goals, and results. Many of us grew up hearing the phrase, “When you play, play hard; when you work, don’t play at all.” But what if play isn’t the opposite of work? What if it’s actually the key to making work more meaningful, creative, and enjoyable? As one of IDEO’s founders famously said, “*The opposite of play isn’t work, it’s boredom.*”

Across the world, companies are proving that play and productivity can go hand in hand. For instance, Google has Lego stations and Broadway-themed meeting rooms where ideas flow more freely. IDEO’s Play Lab gives employees space to experiment and explore new possibilities. Even here in Australia, companies like WiseTech, Rakt, and LEAP Dev are building lively, social workplaces with pizza Fridays, video games, and friendly soccer matches. What these organisations have realised is simple: when people are relaxed, connected, and are having fun, they think differently and better. Play helps teams collaborate, spark ideas, and find new energy in their work.

Researchers have been studying this for decades, showing that play can unlock hidden potential, fuel creativity, and even drive innovation. This review explores how our understanding of play at work has evolved and why bringing a little fun into serious spaces such as the workplace might just make them stronger.

In today’s fast-changing workplaces, few organisations dare to make *play* part of their business strategy. Culture Hero, a Melbourne-based leader in creative culture design, is one of them. Founded by Dara Simkin, the company believes that lasting change begins when people stop fearing it or as Dara puts it,

“Don’t fear change, play with it.”

For over a decade, Culture Hero has harnessed the power of play to reimagine how people connect, learn, and grow at work. Their workshops transform ordinary meetings into moments of curiosity and insight, helping teams rediscover creativity, improve their sense of belonging, and subsequently overall workplace culture.

Now, the organisation is taking the next step, starting with gathering quantitative evidence to understand to what degree play shapes meaningful workplace outcomes. By blending human-centred experience with data-driven evaluation, Culture Hero is not just talking about transformation, they’re measuring it.

Building on this vision, recent scientific literature in workplace culture underscores the need to quantitatively examine how play influences key workplace outcomes such as sense of belonging, work engagement, learning adaptability, and sense of producing innovative solutions. In alignment with this goal, RMIT University partnered with Culture Hero to conduct a study aimed at understanding the effectiveness of play and providing evidence-based insights to answer the following key question: *Does the integration of play in the workplace lead to measurable improvements in critical workplace outcomes such as sense of belonging, work engagement, learning adaptability and a sense of producing innovative solutions?*

This project was undertaken in three stages. Stage 1 involved conducting a comprehensive literature review to understand the concept of play and its various typologies, followed by an exploration of the suggested workplace culture outcomes of play in workplace settings, which informed the development of the empirical studies. Stage 2 tested these outcomes through a controlled study designed to isolate the effects of the play intervention from other external factors, to assess the effect

of play on key workplace culture outcomes. Stage 3 sought to validate the Stage 2 findings through a field experiment conducted in real workplace environments. The aim was to confirm the effectiveness of play in workplaces and whether it produced similar outcomes to those observed under controlled conditions in Stage 2. This stage included a follow-up post survey five weeks after the workshop to understand whether the anticipated changes measured directly after the workshop are maintained over a period of time.

In this report we present the detailed findings and insights from Stages 1, 2, and 3. Together, these three research stages bring to life what Culture Hero has believed from the beginning: that play helps people feel more connected, more energised, and more open to new possibilities. By turning those lived experiences into evidence-based insights, the result of this project helps Culture Hero show organisations why play matters not as a trend, but as a practical way to make work better for people.

RESEARCH PROCESS

This research project included three elements and was undertaken in three stages as depicted in Figure 1.

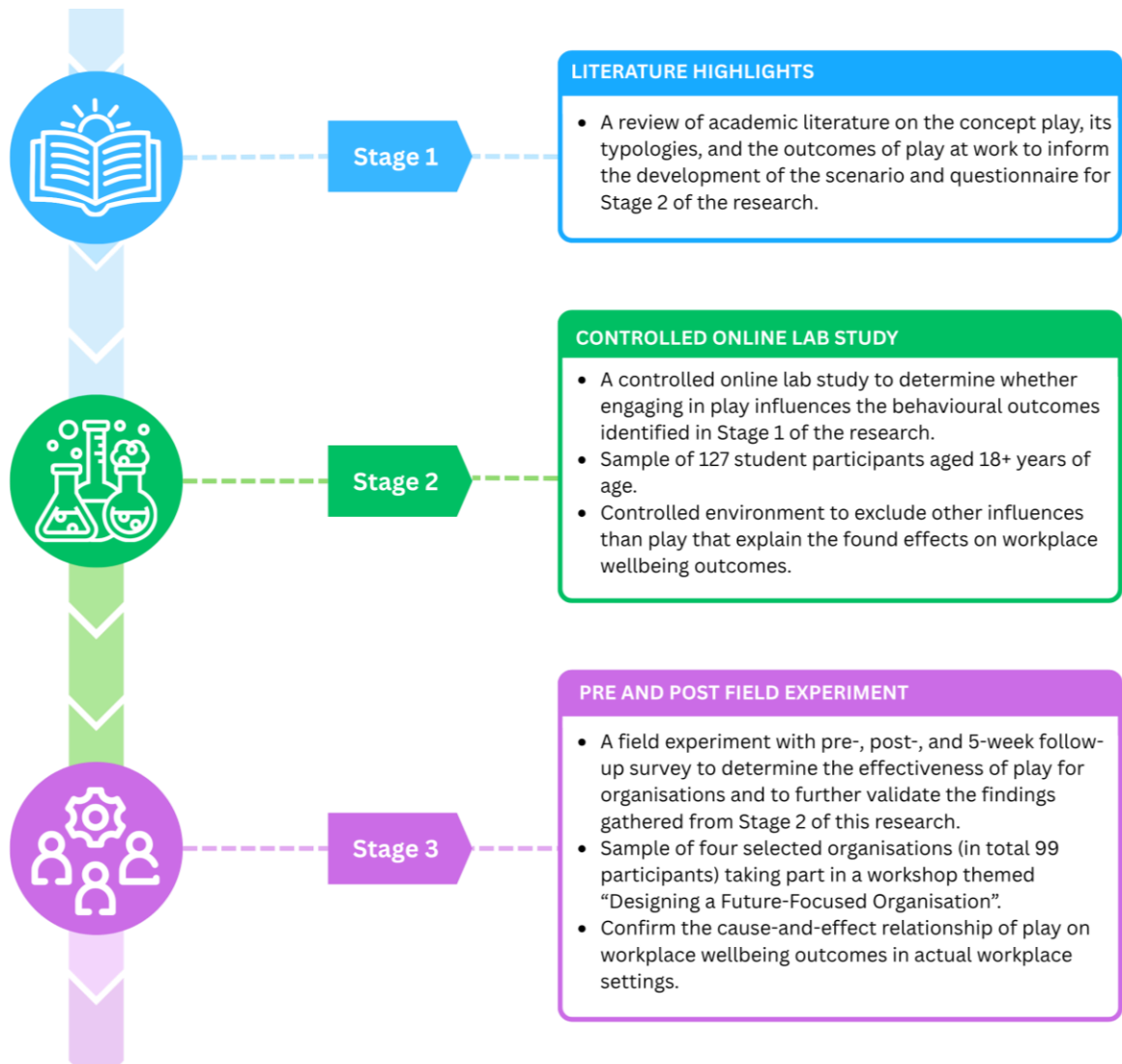


Figure 1: Stages of this study.

STAGE 1

LITERATURE HIGHLIGHTS

WHAT IS PLAY?

Play isn't just about having fun or passing time, it's something deeper and more meaningful. Research shows that play is a natural and universal human activity that people are drawn to because it creates feelings of enjoyment, excitement, and energy (Vleet & Feeney, 2015). It is typically voluntary and intrinsically motivated, meaning people engage in play because they want to, not because they are required to (Lepper & Henderlong, 2000; Mainemelis & Ronson, 2006). Play also involves imagination, allowing individuals to turn ordinary moments into something creative and engaging.

A defining feature of play is immersion. When people are playing, they often become fully absorbed in the activity and experience a psychological distance from everyday pressures, stress, and responsibilities (Petelczyc et al., 2018; Vleet & Feeney, 2015). Unlike more passive leisure activities such as reading, play requires active involvement, either through hands-on interaction with the activity itself or through meaningful interaction with others (Petelczyc et al., 2018).

After reviewing decades of research, Petelczyc and colleagues (2018) concluded that true play has three core ingredients: it is fun and enjoyable, it keeps us fully absorbed in the moment, and it's interactive because we engage deeply either with an activity or with other people (see Figure 2 below). Together these elements explain why play is such a powerful and natural part of human behaviour. Play can be individual, such as building with LEGO, which encourages decision-making and action, or social, such as games that promote communication, connection, and shared experiences. These characteristics of play help explain why play might create conditions that support focus, creativity, and collaboration, qualities that are highly relevant in organisational settings.



Figure 2: Core elements of Play.

While these three core elements describe what play *feels like* as an experience, they do not fully explain what makes an activity *play* rather than just something enjoyable. To address this, we draw on philosophy and child play literature to identify five key characteristics that distinguish play from other pleasurable activities (see Figure 3 below).

First, play is *imaginative*. It involves creating distance from everyday reality and entering an “as if” mode, where things are not taken literally and new meanings are assigned (Gray, 2018; Rubin et al., 1983; Zosh et al., 2018). For example, a chair can be imagined as a horse. Second, play builds *excitement over time*. Although challenges may be involved, the activity remains free from pressure or stress, with enjoyment and satisfaction coming from the process rather than the outcome (Eberle, 2014; Gray, 2017). For instance, people searching for hidden treasure often enjoy the thrill of the hunt more than the treasure itself.

Third, play allows players to *set their own rules*. Individuals choose whether and how to play, shaping the rules to suit their preferences and keep the activity engaging (Bundy, 2001; Eberle, 2014; Gray, 2017; Zosh et al., 2018). A simple example is a child deciding whether to build structures with LEGO or use the pieces for role-play. Fourth, play includes *spontaneous and unpredictable moments*. Its flexible and improvisational nature allows players to shift direction quickly and generate surprising ideas (Eberle, 2014; Sutton-Smith, 1997). During role-play, for example, a new storyline may suddenly change the direction of the game.

Finally, play is driven by *creativity and discovery rather than fixed outcomes*. Motivated by curiosity, players experiment with objects or situations and explore open-ended questions such as “What can I do with this?” (Eberle, 2014; Lebed, 2021; Smith et al., 1985). For instance, a child transforming a cardboard box into a spaceship illustrates how play encourages exploration, multiple possibilities, and novel ideas.

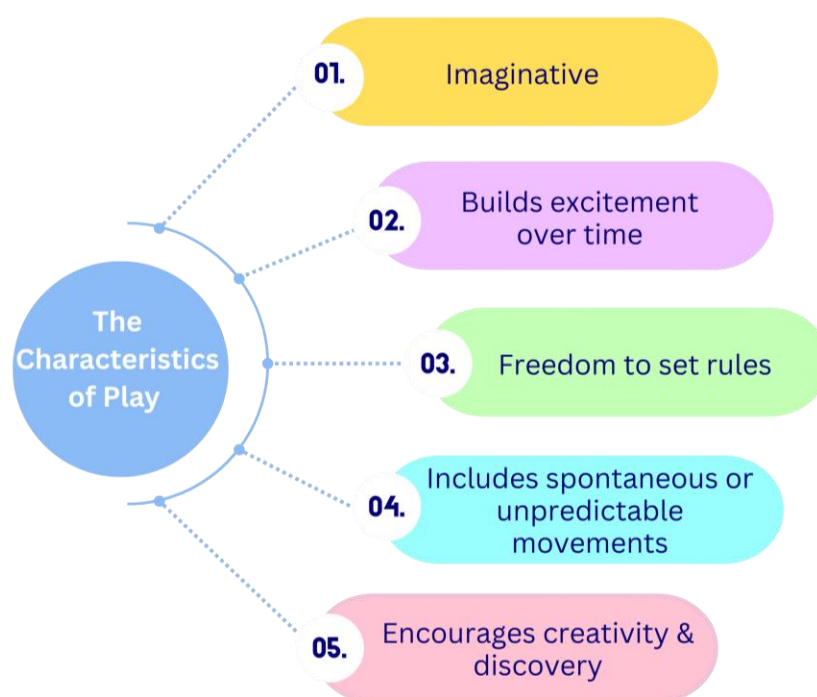


Figure 3: Characteristics of Play.

TYOLOGY OF PLAY AT WORK

Play at work can look very different depending on how and why it happens. Researchers have found that there's no single type of workplace play as it can take many forms. For example, sometimes play is social, like when people play games or take part in fun group challenges together. Other times, it's independent, like when someone takes a playful approach to solving a problem on their own.

Play can also be self-initiated, where employees naturally start something fun, or manager-initiated, where leaders organise playful activities to build team spirit. In some cases, play is free and imaginative (what in academic literature has been called as *ludic play*; Kolb & Kolb, 2010; Kuepers, 2017), while in others, it follows rules or friendly competition (another term in literature called as *agonistic play*; Bakker et al., 2020; Vleet & Fleenor, 2015), such as team contests or workplace games.

Among all these types, two stand out as the most commonly investigated in scientific research: serious play and diversionary play.

In lay terms, *serious play* happens when play and work come together (Schulz et al., 2015; Stalter et al., 2011). For instance, teams might use LEGO Serious Play kits to build models and brainstorm ideas or turn everyday tasks into fun challenges to improve efficiency. In this way, work becomes more engaging and creative. Serious play allows employees to think differently, learn new skills, and feel motivated. Studies show that about 60% of workplace play research focuses on serious play because it helps organisations achieve goals in a fun and purposeful way (Celestine & Teo, 2020; Kuepers, 2017).

From a *cognitive perspective*, employees understand that play has a serious purpose, even if they may not fully know how the spontaneous process of play helps achieve that goal (Mainemelis & Ronson, 2006). Serious play gives people the flexibility to look at their work differently and to try new ways of doing things, breaking away from their usual routines in the workplace. On an *affective level*, engaging in serious play brings the joy of overcoming challenges and the excitement of discovering unexpected solutions (Mainemelis & Ronson, 2006). It also nurtures intrinsic motivation by sparking interest and curiosity in the work itself. Lastly, from a *behavioural perspective*, serious play involves an engaging and goal-oriented approach to work, encouraging employees to put in the effort needed to develop new resources such as increased productivity and new skills (Celestine & Yeo, 2020).

Diversionary play, on the other hand, takes place outside of work tasks. It includes activities like playing table tennis, video games, or chatting with colleagues during breaks. Although it's not directly linked to job performance, this type of play helps people relax, recharge, and connect socially (Celestine & Yeo 2020; Fourie et al., 2020; Hunter et al., 2010; Mainemelis & Ronson 2006; Petelczyc et al., 2018). It reduces stress and prevents burnout, making employees feel more refreshed and ready to return to work (West et al., 2017). Despite receiving less attention in research (accounting for less than 40% of workplace play studies) compared to serious play, diversionary play has a significant impact on work, as it supports workplace culture and team bonding (Celestine & Yeo, 2021; Mainemelis & Ronson, 2006; Petelczyc et al., 2018). Table 1 below provides a summary of their main characteristics.

COMPARISON

SERIOUS PLAY	VS	DIVERSIONARY PLAY
With purpose (work responsibilities or organisational goals)		Without purpose (work responsibilities or organisational goals)
Intersect with work; play as mean and work as end		Separate from work; but in cooperative mode
Aware of purpose and focus on work; see work in different work		Forget or avoid work
Pleasure in challenge		Psychological detachment; sense of freedom
Engaged with and perform work		Escaping from work

Note: Key distinctions from literature (Adapted from Petelczyc et al., 2018; Celestine & Yeo 2020)

Table 1: Comparison between Serious Play and Diversionary Play.

Now that we have a good overview of what play is, in terms of its core elements and characteristics, and the distinction between different types of play, we now turn our attention to identifying how play shapes important workplace culture indicators. While research has often investigated serious play as separate from diversionary play, we adopt the stance of defining play in terms of the characteristics that make it 'play' rather than distinguishing along the lines of type of play. After all, we are interested in understanding whether play influences workplace outcomes, not what types of play do. Indeed, play, with all of its core characteristics, can be integrated in both types of play.

The below section outlines the key workplace outcomes that have been associated with play.

OUTCOMES OF PLAY AT WORK

Prior research (see Table 2) has identified a range of outcomes associated with play; however, these have often been examined separately, with more attention given to some than others. To provide a more integrated understanding, this section focuses on key outcomes that are most consistently discussed in the literature and are deemed highly relevant to organisational contexts according to Culture Hero's experiences. Moreover, we specifically focus on workplace outcomes that are indicative of workplace culture (see Figure 4 below).



Figure 4: The Outcomes of Play

Workplace culture is often reflected in a range of employee outcomes. Below we discuss workplace culture outcomes that fall under the mental and social domains, as these can be affected by play (Lee, 2019). Table 2 below summarises these outcomes, their definitions, and the extent to which they have been examined in prior research.

Outcomes of Play	Original Definition	Studies in the context of Play
Sense of producing innovative solutions	The intentional creation, introduction, application of new ideas within a work role, a group or organisation, in order to benefit role performance, the group, or the organisation (Janssen 2000)	Dodgson 2017; Dougherty & Takacs 2004; Hjorth 2004; Hunter et al., 2010. Kane 2004; Kurt et al., 2010; Mainemelis & Ronson 2006 ; Pors & Andersen 2015; Schulz et al., 2015.
Sense of belonging	The feelings that people feel connected to others, and love and care others while being loved and cared for (Deci & Ryan 2000).	Hunter et al., 2010; Keith 2018, 2020; Kolb & Kolb 2010; Sandelands 2010; Wheeler et al., 2020; Langley et al., 2018
Work engagement	A positive and fulfilling work-related state where people feel energized, enthusiastic and fully immersed in their work (Scharp et al., 2019; Schaufeli et al., 2006).	Fourie et al., 2020; Hunter et al., 2010; Scharp et al., 2019; 2022.
Learning adaptability	Individuals' ability to address novel challenges and acquiring new skills and methods is crucial	Not yet explored in play research, but studied in education, child development, and military contexts.

	(Boulamatsi et al., 2021).	
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Table 2: Literature informed outcomes of play at work

Play and Sense of Belonging

A sense of belonging is the feeling of being valued, connected, and included within a team or organisation (Deci & Ryan, 2000). For organisations, a strong sense of belonging remains a critical driver of engagement, retention, and performance. When employees feel connected and valued, they collaborate more effectively and contribute more confidently (Wheeler et al., 2020). Qualitative research shows that play can strengthen sense of belonging by fully engaging people in the moment and allowing them to step away from everyday roles and hierarchies (Petelczyc et al., 2018; Vleet & Feeney, 2015). This temporary detachment from work structures enables individuals to relate to one another on a more human level (Hunter et al., 2010; Wheeler et al., 2020). For example, in a LEGO Serious Play workshop, employees described working alongside their director as “a bunch of friends playing LEGO together,” highlighting how play can foster connection and reduce status differences (Wheeler et al., 2020, p. 148). Similarly, Kolb and Kolb (2010) found that employees participating in a softball game outside work connected as individuals rather than through their organisational roles.

Beyond individual connection, play also creates shared experiences that help build trust and a common language within teams. During play based activities, employees actively interact, exchange ideas, and share excitement, which strengthens bonding and social connection (Dougherty & Takacs, 2004; Wheeler et al., 2020). These shared moments make it easier for employees to communicate informally and build relationships in a relaxed and inclusive way (Hunter et al., 2010). Beyond this, play offers an additional benefit by helping teams develop a clearer understanding of how their roles and contributions are interconnected. Case studies show that when employees use tools such as LEGO to represent their work and relationships, they gain new insights into how their actions fit together, where challenges exist, and how the team functions as a whole, a process described by one participant as “team brain building” (Dougherty & Takacs, 2004; Schulz et al., 2015; Wheeler et al., 2020, p. 150). This playful distance from everyday work allows employees to rethink how they see one another, while still applying these insights back in the workplace.

While many qualitative studies suggest a strong association between play and sense of belonging, quantitative evidence remains limited. One experimental study by Keith (2018) examined the impact of play by comparing team video gaming with traditional goal-based training on team cohesion. Although gaming improved cohesion, it was less effective than structured team-building programs. Notably, there is still little quantitative research examining how play influences a sustained sense of belonging, highlighting an important gap in current understanding. Furthermore, in the research literature, sense of belonging is commonly measured using the relatedness scale (La Guardia et al., 2000), rather than team cohesion, and thus the above-described results are not necessarily transferable to understanding the relationship of play with sense of belonging.

Taken together, for organisations, these findings suggest that play can be a purposeful mechanism for strengthening sense of belonging within a team when it is intentionally designed and facilitated. Playful interventions have the potential to reduce hierarchical barriers, support open interaction, and help teams develop a shared understanding of how individual contributions connect to collective goals. However, the limited availability of quantitative evidence means organisations should move

cautiously beyond symbolic or ad hoc initiatives. Instead, there is a clear opportunity to adopt evidence-informed approaches that test and refine how different forms of play can be used to build sustained sense of belonging across diverse teams and work contexts.

Play and Work Engagement

Work engagement is described as a positive and fulfilling state in which employees feel energised, enthusiastic, and deeply absorbed in their work (Scharp et al., 2019). Research consistently shows that higher levels of engagement are associated with improved productivity and job satisfaction (Caracuzzo et al., 2024; Scharp et al., 2022). Engaged employees tend to display greater energy, dedication, and focus in their roles (Scharp et al., 2019).

Within this context, research suggests that play can meaningfully influence work engagement in different ways. For example, studies by Scharp and colleagues (2019; 2022) show that playful activities that involve fun, challenge, or competition and have a purpose within work contexts have a positive effect on engagement. Play supports employees' needs for autonomy, social interaction, and competence, all of which are key drivers of motivation at work. It allows employees to set personal or shared goals, creating a sense of control and achievement thereby increasing motivation and making work feel more engaging (Scharp et al., 2019). When employees see themselves as capable and self-motivated, they are more likely to invest energy and enthusiasm in their work.

At the same time, research also shows that some forms of play may support engagement indirectly. For example, Hunter et al., (2010) found that playing games outside work helped software engineers manage job-related stress, while Fourie et al., (2020) reported that such activities primarily support psychological detachment from work rather than directly increasing enjoyment or reducing boredom at work. These findings suggest that while some playful activities may contribute more directly to engagement, others may enhance workplace culture and recovery, which can still support employees' overall capacity to remain engaged at work.

For organisations, play is not merely a morale booster, it is a strategic tool for driving productivity, creativity, and long-term organisational success. By embedding playful experiences into the workplace, leaders can cultivate a culture that sustains motivation. The key lies in striking the right balance which is combining purposeful play that aligns with work goals with restorative play that supports workplace culture and long-term motivation.

Play and Learning Adaptability

Learning adaptability refers to the ability to adjust to new challenges, learn quickly, and apply knowledge in changing environments, an ability that has become critical in today's dynamic workplaces (Boulamatsi et al., 2021). As organisations face increasing uncertainty and rapid change, this capability is no longer optional. For organisations, learning adaptability underpins resilience, innovation, and long-term performance (Awad & Martin-Rojas, 2024). Investing in practices that encourage experimentation, reflection, and flexible thinking is not about play for its own sake; it is about developing a workforce capable of navigating disruption, solving emerging problems, and continuously evolving. Understanding how play contributes to adaptability allows leaders to design more effective development initiatives that strengthen organisational capability over time.

Although only a small number of studies have examined how play supports adaptability at work, early evidence suggests that play can encourage more flexible thinking. For example, Jacobs and Statler (2006) found that when employees engaged in playful activities using metaphors and storytelling, they

were better able to cope with ambiguity. In their study, organisations were framed as a “flotilla of ships” and brands as a “lighthouse,” helping employees move away from rigid analysis and instead rely on intuition to explore alternative ways of understanding complex problems. This process enabled participants to view challenges from multiple perspectives and adapt more effectively to unfamiliar situations.

It is noted that certain workplace outcomes such as sense of belonging, and work engagement are most immediately visible within workplace interactions and performance. However, learning adaptability has received comparatively limited attention within the play literature, despite its close alignment with the core characteristics of play outlined earlier, such as exploration, flexibility, and discovery. While adaptability has been examined in other domains, including the military (Mun et al., 2017), education (Okita, 2014), and child development (Li et al., 2023; Khasanah & Purnamasari, 2023), its role in workplace play remains underexplored.

The incorporation of play into the workplace can plausibly influence learning adaptability, particularly as adaptability has long been a central focus in research on skill development and responding to dynamic and creative environments. Given that play encourages individuals to experiment, respond to uncertainty, and engage with new ideas, it is likely to play an important role in supporting learning adaptability. This highlights the value of examining learning adaptability alongside more widely observed outcomes to provide a more complete understanding of how play influences workplace behaviour as outlined.

Play and Innovation

Closely related to creativity, innovation refers to the deliberate creation, introduction, and application of new ideas that improve individual roles, teams, or organisations (Janssen, 2000). Play supports innovation by creating space for imagination and exploration, allowing people to consider possibilities that are not yet clearly defined, an essential part of innovative thinking (Andersen & Pors, 2014; Hunter et al., 2010; Pors & Andersen, 2015). Rather than viewing the future as fixed or predetermined, employees who engage in play are more open to imagining alternative futures and exploring radically new perspectives (Andersen & Pors, 2014; Hunter et al., 2010). When this playful exploration is treated with seriousness and intention, it can translate into practical and meaningful innovations once employees return to everyday work.

Empirical examples illustrate the above process. Andersen and Pors (2014) examined employees who participated in a serious game focused on self-reflection, where participants compared imagined future scenarios with their current organisational reality. This comparison helped them identify new opportunities for organisational change and innovation. Similarly, Schulz et al., (2015) found that playful workshops often led to outcomes participants had not anticipated, demonstrating how open-ended play can produce unexpected innovations. Beyond the workplace, Hunter et al., (2010) showed that certain enjoyable play activities outside of work can help employees step away from future-oriented pressures, refresh their thinking, and return with renewed creativity and problem-solving capacity.

Despite broad agreement that play supports innovation, much of the existing research remains conceptual rather than empirical (Dodgson, 2017; Kane, 2011; Kurt et al., 2010; Mainemelis & Ronson, 2006). The empirical evidence that does exist is largely qualitative and based on case studies (Dougherty & Takacs, 2004; Hjorth, 2004; Hunter et al., 2010; Pors & Andersen, 2015; Schulz et al., 2015). As a result, there is limited quantitative understanding of how play contributes to innovation and problem-solving in organisational settings.

For organisations, these findings suggest that play can be a valuable mechanism for supporting innovation when it is intentionally designed and integrated into work practices. Purposeful play can help employees explore new ideas, challenge existing assumptions, and translate imaginative thinking into actionable outcomes. At the same time, more informal play may support innovation indirectly by refreshing thinking and restoring creative energy. However, the limited quantitative evidence highlights the need for organisations to move beyond ad hoc or symbolic play initiatives and instead adopt evidence-informed approaches that systematically test how different forms of play contribute to innovation, problem-solving, and long-term organisational performance.

RESEARCH GAP AND DIRECTION

Play has been consistently linked to outcomes such as a sense of belonging, work engagement, and innovation, key drivers of organisational performance (see Figure 3). Together, the research reviewed above shows that play can meaningfully influence both individual and organisational outcomes. In particular, studies highlight strong and consistent links between play and positive behaviours including engagement, belonging, innovation, and learning adaptability.



**CLOSING THE
LOOP:
FROM INSIGHTS
TO EVIDENCE**

Despite this growing body of work, most existing insights are based on single observations, case studies, and conceptual discussions rather than that they provide robust, measurable evidence. For example, Celestine and Yeo (2020) found that out of 122 studies examining play in the workplace, only 31 used quantitative methods, and many of these did not employ experimental designs capable of establishing clear cause-and-effect relationships. As a result, while play is widely recognised as beneficial, there remains limited empirical clarity around *to what extent* play improves key drivers of organisational workplace culture.

This gap has important implications for organisations. If leaders are to invest time, resources, and effort into integrating play into work environments, they require reliable, evidence-based guidance to ensure these initiatives deliver meaningful outcomes. Addressing this gap through quantitative and experimental research is therefore critical, not only to demonstrate the causal impact of combining play and work, but also to support organisations in making informed, strategic decisions that enhance individual and organisational performance.

STAGE 2

CONTROLLED ONLINE LAB STUDY

BACKGROUND AND PURPOSE

More empirical research is needed to establish to provide quantitative evidence for the relationship between play and key workplace culture outcomes at work. To address this gap, the second stage of this research involved a controlled online lab study designed to test the proposed conceptual framework (see Figure 3) and examine whether play is significantly related to employees' sense of belonging, work engagement, learning adaptability, and ability to produce innovative solutions.

STUDY DESIGN AND PROCEDURE

This study involved 127 RMIT University student participants aged 18 and above, recruited through the ORSEE participant database. Participants were randomly assigned to one of three play variations: highly playful collaboration, no play collaboration and a no play no collaboration control condition. Participants received \$25 for their participation. The experiment was conducted online via Microsoft Teams guided by a facilitator, with all tasks completed using Miro boards to explore the central question: "*Why are students not attending classes?*"

Session Setup

First, participants were greeted in an online Teams session wherein they received a short introduction to the study, and tasks that followed. Then participants were divided into three virtual breakout rooms. For each group, three participants were randomly allocated to a breakout room, and each breakout room was randomly allocated one of the three conditions: 1) playful collaboration, 2) non-play collaboration, and 3) non play no collaboration condition. The facilitator of the session then joined each room separately to provide individual instructions and access to a Miro board wherein the participants completed the experimental tasks.

Condition Instructions

In the *play collaboration condition*, participants were instructed to collaborate with their team members in a playful task to help them gain an understanding and gain deeper insights into the issue provided to them "why are students not coming to class?". *Playfulness* was manipulated as follows: Upon accessing the Miro Board, participants were first asked to take individual selfies while they pulled a funny face. Then they worked together collaboratively to select one or more selfies and transform them into memes that illustrate answers to why students are not coming to class, according to them. To encourage fun and enjoyment, participants were invited to create as many memes as they wished. An example meme was provided to ensure clarity regarding the task requirements. This activity was designed to be fun, engaging, collaborative, and purposeful, with the goal of deepening participants' understanding of the issue at hand. In the *non-play collaboration condition*, participants were instructed to engage in the same task in collaboration with others but not in a playful manner. In this condition, participants were tasked with instructions to collaborate with each other and discuss the previously mentioned question, with the goal of generating as many answers on sticky notes as possible. Lastly, in the *no play no collaboration condition* participants were instructed to independently consider the aforementioned issue and generate as many answers as possible without

collaborating with others, nor providing their answers on the Miro board.

Ideation/Solutions Phase

Across all three conditions, participants then entered a second phase, working together in their condition groups to generate potential solutions to the issue they had examined in the initial task and by filling the Miro Board with sticky notes that on which they placed these ideas.

Survey Phase

Following completion of both task phases, participants completed a Qualtrics survey assessing the key workplace culture outcomes of interest in this study.

WORKPLACE CULTURE OUTCOMES ASSESSED

This study examined four core workplace culture outcomes essential to understanding how play influences workplace performance: sense of belonging, work engagement, learning adaptability, and sense of producing innovative solutions. All items were adapted from established, validated scales (see Table 3 in Appendix). Sense of belonging (adapted from La Guardia et al., 2000) captured how connected and supported participants felt within their group during the collaborative ideation task. Work engagement (adapted from Schaufeli et al., 2006) assessed the extent to which participants felt energised, absorbed, and committed during the activity. Learning adaptability (adapted from Ployhart & Bliese, 2006) measured participants' ability to adjust and respond effectively when faced with complex problem-solving tasks. Lastly, sense of producing innovative solutions (adapted from Janssen, 2000) evaluated the extent to which participants perceived their group's ideas and outputs as innovative and solution focused. Together, these four elements provided a comprehensive view of how playfulness shapes individual and team behaviours during collaborative work.

KEY RESULTS AND FINDINGS

Validity and reliability of behavioural measures

To ensure the accuracy and consistency of our measurement tools, we conducted exploratory factor analysis (EFA) and reliability testing. These analyses confirmed that the survey items were effectively capturing the intended workplace culture outcomes, and as separate from each other (meaning they are unique outcomes that do not overlap with others). Based on these results, we created composite variables by averaging the relevant items for each workplace culture outcome (e.g., all different Sense of Belonging questions becoming one average variable we called SOBComp). These composite measures were then used in all subsequent analyses presented in this report.

Manipulation Outcome

Participants in three conditions (playful collaboration, non-play collaboration, and no play/no collaboration) experienced the given activity types as quite similar and showed no significant differences between conditions on the outcome variables. This limited our ability to compare groups to assess if play had an effect on the outcome variables. However, for the play condition (N=53) we measured the level to which they experienced the activities as playful, which allowed us to take a correlational approach to assessing how playfulness is related to the outcome variables. We describe these associations in more detail below.

Impact of Playfulness on Workplace Culture Outcomes

The results from the correlation table (see Table 5 below) provide insights into the importance of playfulness at work. It was noted that experiencing a task as playful had a positive association ($p < 0.05$) with participants' sense of belonging, sense of producing innovative solutions, work engagement and learning adaptability.

Variable		Playfulness
1. Playfulness		—
2. Sense of Belonging	Pearson's r	0.458
	p-value	< .001*
3. Sense of producing innovative solutions	Pearson's r	0.508
	p-value	< .001*
4. Work Engagement	Pearson's r	0.577
	p-value	< .001*
5. Learning Adaptability	Pearson's r	0.401
	p-value	0.003*

Note: *= $p < 0.05$ (significance level)

Table 5: Correlation results between playfulness and dependent variables

To gain a better understanding of the relative importance that playfulness has in influencing the outcome variables relative to each other, we conducted a multivariate regression analysis with playfulness as independent variable and the outcome variables as dependent variables. This analysis confirmed our correlation results in that playfulness has a significant positive effect on all the outcome variables ($\eta^2 = .391$, $P < .01$), but this statistic (η^2) also allows us to compare the different outcome variables with each other to see which one is more or less affected by play. These statistics showed that relative to the others, playfulness has the strongest effect on work engagement ($\eta^2 = .333$), followed by sense of producing innovative ideas ($\eta^2 = .258$), sense of belonging ($\eta^2 = .210$) and had the least effect (but still significant) on learning adaptability ($\eta^2 = .161$).

Understanding deeper relationships among workplace outcomes

While the above analyses have consisted of only responses from a subset of our participants (only those who participated in the play condition for whom we had playfulness scores), we were able to analyse the whole sample ($n = 127$) to understand how the workplace outcome variables themselves (sense of belonging, sense of producing innovative solutions, work engagement and learning adaptability) are related to each other. The results from the correlation table (see Table 7 below) provide insights into the importance of relationships between the workplace culture outcomes. The results showed that a highly positive relationship exists between learning adaptability and work engagement (Pearson's $r = 0.751$). This means that the more they are engaged with their work, the more likely they are to also adapt to future tasks and challenges with a positive mindset. It was also observed that the weakest, yet still significant, correlation emerged between learning adaptability and sense of belonging (Pearson's $r = 0.369$). This suggests that when individuals experienced a lower

sense of belonging, they also feel less capable of adapting to future tasks; however, because this effect was relatively weak, this may be more so because they are all workplace culture outcomes and are as such related than that we would want to speculate about direct associations where one explains an increase in the other.

Variable		Sense of Belonging	Sense of Producing Innovative Solutions	Work Engagement	Learning Adaptability
1. Sense of Belonging	Pearson's r	—			
	p-value	—			
2. Sense of Producing Innovative Solutions	Pearson's r	0.549	—		
	p-value	< .001	—		
3. Work Engagement	Pearson's r	0.559	0.508	—	
	p-value	< .001	< .001	—	
4. Learning Adaptability	Pearson's r	0.369	0.504	0.751	—
	p-value	< .001	< .001	< .001	—

Note: $*=p<0.05$ (significance level)

Table 7: Pearson correlation results between all dependent variables across the sample

Finally, the fact that all correlations between the workplace culture outcomes such as the sense of belonging, sense of producing innovative solutions, work engagement, and learning adaptability are positive and significant, combined with the fact that playfulness positively influences all of these, validates our conceptual framework, which was created in the first stage of the project as a result of the literature review (see Figure 3).

WHAT INSIGHTS DO WE GAIN FROM THIS?

The results of the controlled online study offer clear insights into how playfulness influences key workplace behaviours. While the playful activity manipulation did not create a strong distinction between the conditions, the correlational data consistently showed that individuals who *felt* the activity was playful demonstrated higher levels of work engagement, sense of belonging, and learning adaptability and sense of producing innovative solutions. This reinforces the idea that it is the experience of playfulness and not merely the presence of a playful task that drives meaningful behavioural outcomes.

A notable insight is that playfulness had the strongest impact on work engagement, while learning adaptability appeared to have a weaker relationship with playfulness. Another insight is that all

workplace culture outcomes were all well associated with each other, except for the weaker association with sense of belonging. While this is all speculation, this suggests that the effect of playfulness on learning adaptability is mostly explained by an increase in engagement, and maybe a bit by the experience of being able to create more innovative ideas, while it is likely mostly other related to sense of belonging by virtue of all of them both workplace culture outcomes.

Notably, we see that playfulness is related to different types of workplace culture outcomes described in the literature (Lee, 2019), with engagement being more motivational/energising, belonging being more social, and learning adaptability and creating innovative solutions being more cognitive. This broad spectrum of workplace culture types being affected by playfulness is another indicator that play can play a large role in increasing workplace culture outcomes in multiple ways.

While these insights are valuable, the controlled study also revealed an important limitation: our approach to creating different play conditions did not seem to work as expected. Participants did not know each other, and genuine play typically requires psychological safety, familiarity, and trust. Additionally, the activity relied on humour-based tasks, which represent only one narrow expression of play. This reinforces a key practical implication for organisations: play is most effective within established teams, where people already share rapport, feel safe to experiment, and have a foundation that allows creativity to surface naturally.

This learning directly shapes the next phase of the project. Stage 3 will focus on embedding play within real organisational teams, where the conditions for psychological safety, collaboration, and authentic play already exist. This will allow us to assess the true impact of playfulness under operationally relevant, real-world circumstances and validate that play influences work engagement, sense of belonging, learning adaptability and sense of producing innovative solutions in day-to-day work environments.

Together, these insights highlight both the potential of playfulness as a catalyst for performance and the practical considerations needed to apply it effectively, setting a strong foundation for the upcoming workplace field experiment.

STAGE 3

PRE AND POST FIELD EXPERIMENT

BACKGROUD AND PURPOSE

The purpose of the field experiment was to validate the findings from the earlier correlational analyses in the study from Stage 2 of this project by examining whether playfulness influences key workplace culture outcomes in real workplace settings as outlined in Figure 3 of the project. The outcomes assessed were sense of belonging, work engagement, learning adaptability, and the ability to produce innovative solutions.

WORKSHOP CONTEXT AND DESIGN

Participants from four selected organisations took part in a workshop themed “*Designing a Future-Focused Organisation*.” The aim of the workshop was not to develop a concrete strategy or operational plan, but to begin to envision the organisation’s long-term future. All recruited participants were randomly assigned to one of two experimental workshops. The first group of participants served as the experimental play workshop group, in which participants were encouraged to collaborate through playful tasks. The second group served as the control workshop group, in which participants were encouraged to collaborate, but without the use of playful tasks.

Session Setup

At the start of each session, participants were welcomed into a workshop room by a representative of their organisation, where they received a brief introduction to the experiment and the tasks ahead, beginning with the completion of a *pre-survey* (see Table 8 in Appendix). The *pre-survey* asked participants to indicate the extent to which they currently felt a sense of belonging with their colleagues at work (sense of belonging), the extent to which they felt engaged at work (work engagement), the extent to which they were able to adapt at work (learning adaptability), and the extent to which they were generating innovative ideas (sense of producing innovative solutions) as shown in Table 8 in Appendix. After completing the pre-survey, an industry-renowned facilitator led each workshop session, providing instructions and guiding participants through the experimental tasks.

Condition Instructions

The play workshop was designed to include all the elements that make up play as defined in the literature review highlights: imaginative, built excitement over time, provided freedom to set rules, included spontaneous or unpredictable moments, and encouraged creativity and discovery rather than focusing on a fixed outcomes. First, participants spent the 20 minutes engaging in light, energising playful activities such as the “Yes, and ... Yes, but ...” exercise to introduce the principles of play and *build excitement* and psychological safety within the group. Following this warm-up, teams of four to five participants collaborated on a future-focused challenge “*What might our organisation’s Version 2.0 look like 100 years from now?*” designed to stimulate *imaginative* thinking.

To encourage playful exploration, participants were guided to collectively imagine an alternative future version of their organisation, considering elements such as:

- How and where the organisation would operate?
- How might employees work and commute?
- What products and services would exist, and
- Who would their customers be?

The facilitator introduced structured playful prompts to build momentum and allow the group to set their own *creative rules*. Midway through the activity, an unexpected future (*unpredictability*) scenario such as a global pandemic emerging 30 years ahead was introduced to challenge teams to adapt their imagined organisation in response to new threats, opportunities, and emerging trends (*unpredictability*). This unexpected turn of events added another core element of play, prompting teams to think flexibly, respond *creatively*, and reassess their assumptions.

Throughout the process, participants were encouraged to reflect on guiding questions including:

- What problems might arise for your organisation in the future?
- What opportunities could emerge?
- What trends may shape the future of your organisation?
- How might your organisation adapt and innovate in a changing future?

This structured, imaginative format was designed to activate playfulness.

In the control workshop condition, in the first 20 minutes participants engaged in a warm-up discussion on the issue: “How to make meetings more energising.” Following this, they were instructed to collaborate with their team members to discuss “What their organisation might look like 100 years from now.” To address this task, participants responded to the same set of guiding questions as those in the Play workshop group; however, their discussions were conducted in a structured, non-playful format rather than through playful activities. The control workshop was structured the same as the play group and dealt with similar topics of content; however, all activities were discussion-based rather than playful. Instead of using imagination or “what if” thinking, they approached the task through realistic and analytical discussion. The session followed a steady format without any energising or momentum-building activities, and participants were not given flexibility to set their own rules, as the discussion was guided by predefined expectations. There were also no unexpected scenarios introduced during the session, meaning the experience remained predictable throughout. Overall, the focus was on structured discussion and logical responses rather than open-ended exploration or creative experimentation.

Finally, after completing these tasks, all participants responded to a *post-survey* designed to assess changes in their perceptions and the target behavioural outcomes (see Table 9 in appendix). The post-survey asked them to indicate the extent to which they felt they would experience a sense of belonging, engagement, adaptability, and innovativeness moving forward after having participated in the workshop. They were also asked to indicate how playful the session was using a measurement scale that included all elements of play. A total of 98 participants (45 in play workshop and 53 in control workshop) completed the pre-and-post experiment survey. Finally, a follow-up survey was sent after five weeks to assess their long-term experience of these workplace culture outcomes.

KEY RESULTS AND FINDINGS

Validating the playfulness manipulation

First, we examined whether changes in the workplace culture outcomes from pre-to-post survey differed between participants who took part in the playful workshop and those who participated in the non-playful discussion workshop. We expected that participants in the play group would show meaningful improvements from pre-to-post, while no significant change would be observed in the control group.

Before assessing these outcomes, it was essential to confirm that the play group actually experienced their workshop as more playful than the control group, ensuring that any differences could be attributed to the presence of playfulness. Playfulness was measured using items (see Table 8 in appendix) that assessed whether the session felt imaginative, built excitement over time, provided freedom to set rules, included spontaneous or unpredictable moments, and encouraged creativity and discovery rather than focusing on a fixed outcome. These elements coincide with the scientific literature outlining essential elements of play. An independent samples t-test (see Table 10 in appendix) confirmed a significant difference in perceived playfulness between the two workshops. Participants in the play workshop reported a mean score of 6.40 on a 7-point scale, compared with 5.48 for the control workshop. ($p < .001$) This demonstrates that the play workshop was indeed experienced as more playful, validating the success of the experimental manipulation of play.

Impact of play on workplace culture outcomes: Pre to Post

To understand the impact of the play workshop on workplace culture outcomes, we compared the play and control groups before and after the workshop. The results showed that the play group experienced stronger positive changes over time compared to the control group. This was confirmed through a MANOVA analysis, which showed a significant interaction between condition and time (Trace Pillai (1,191) = .059, $p = .022$), indicating that the changes observed from pre-to-post survey were meaningfully different between the two groups.

To further examine these differences, separate ANOVAs were conducted for each workplace culture outcome. As evident from Figures 4, 5, 6 and 7, sense of belonging shows a clear difference between the play and control groups over time ($F = 5.551$ (1,191), $p = 0.019$, $\omega^2 = 0.023$). Both groups started at similar levels before the workshop ($t = .259$, $p = 1$; $M_{\text{Cont_pre}} = 5.92$, $M_{\text{Play_pre}} = 5.88$), but after the workshop, the play group reported a significantly higher sense of belonging ($M = 6.24$) compared to the control group ($M = 5.71$), with this difference being statistically significant ($t = -3.079$, $p = .014$), indicating that the play-based activities helped participants feel more connected to their colleagues.

A similar pattern was observed for work engagement ($F = 4.656$ (1,191), $p = 0.032$, $\omega^2 = .017$), where both groups started at similar levels ($t = 0.179$, $p = 1$; $M_{\text{Cont_pre}} = 5.41$, $M_{\text{Play_pre}} = 5.38$), but the play group showed higher engagement after the workshop ($M = 6.16$) than the control group ($M = 5.59$), with a significant difference ($t = -2.878$, $p = 0.027$), suggesting that play increased energy and engagement at work.

For learning adaptability, the results again showed a stronger improvement in the play group ($F = 7.202$ (1,191), $p = 0.008$, $\omega^2 = 0.031$), with both groups starting at similar levels ($t = 0.735$, $p = 1$; $M_{\text{Cont_pre}} = 6.08$, $M_{\text{Play_pre}} = 5.97$), but the play group reporting higher adaptability after the workshop ($M = 6.34$) compared to the control group ($M = 5.89$), with a significant difference ($t = -3.065$, $p = 0.015$), indicating that play helped participants feel more capable of adapting to change and new challenges.

However, for sense of producing innovative ideas, both groups improved (Control: MCont_pre = 5.32, MCont_post = 5.81, $t = 2.741$, $p = 0.04$; Play: MPlay_pre = 5.54, MPlay_post = 6.28, $t = 3.768$, $p = 0.001$), but there was no significant difference between them ($F = 0.814$ (1,191), $p = 0.368$, $\omega^2 = 0$), suggesting that the improvement in innovation was likely driven by the collaborative nature of the workshop itself rather than the play component specifically.

Impact of play on workplace culture outcomes: Pre to Follow up

Five weeks after the workshop, participants reported that their experiences had largely returned to the same levels as before the workshop. To better understand this, results were compared from before the workshop and five weeks later across both the play and control groups. A MANOVA was conducted to examine whether there were differences over time between the two groups across four workplace culture outcomes: sense of belonging, work engagement, learning adaptability, and sense of producing innovative solutions. The results showed no meaningful differences between the play and control groups over time. The only change observed was a small decrease in learning adaptability ($M_{total_pre} = 6.02$, $M_{total_followup} = 5.63$, $t = 2.618$, $p = 0.01$), and this change occurred across both groups, meaning it was not linked to the play-based workshop. In simple terms, the positive effects of the play-based activities did not last overtime. This suggests that while play can create immediate benefits, these effects may fade unless play is used more regularly in the workplace.

DISCUSSION OF INSIGHTS

To provide a clearer interpretation of these results, percentage changes were also examined. The results show a consistently stronger positive shift among participants who engaged in playful collaboration:

- Sense of Belonging increased by 6.3% in the play group ($p = .03$), with no meaningful change in the control group. The difference in change from pre to post between groups was statistically significant ($p = .02$).
- Work Engagement saw the largest improvement, rising by 14.5% in the play group ($p < .001$), again with no change in the control group. The difference in change from pre to post between groups was significant ($p = .03$).
- Learning Adaptability increased by 6.4% in the play group ($p = .02$). While the control group showed no improvement, the difference in pre-to-post change between the two groups was not statistically significant ($p = .05$).
- For Sense of Producing Innovative Solutions, both groups improved at similar levels, suggesting that collaborative problem-solving itself enhances feelings of innovativeness, regardless of whether the activity is playful.

The field experiment reinforces the insights from the Stage 2 controlled study. Across both environments, when participants experienced playfulness during collaboration, they anticipated stronger feelings of sense of belonging with colleagues, higher levels of work engagement, and greater confidence in their ability to adapt and learn. These patterns reinforce the conclusion that playfulness positively influences workplace culture drivers that support employee wellbeing, performance, and retention.

However, the follow-up results show that five weeks after the workshop, participants' responses had mostly returned to the levels they reported before the workshop. When we compared results over time between the play and control groups, there were no meaningful differences. Although there was a small drop in learning adaptability, this happened across both groups, meaning it was not caused by play.

This pattern indicates that while play generates clear short-term benefits, these effects are not sustained once the intervention ceases. Although this study did not directly test the impact of ongoing integration, the observed decline in outcomes following a single exposure strongly suggests that continuity is a key condition for maintaining these benefits. In this sense, one-off playful interventions appear insufficient. Rather, the findings point to the importance of embedding play as a regular feature of workplace practice if organisations aim to sustain improvements in engagement, belonging, and adaptability.

Another interesting observation is that although the improvement in innovative solutions did not differ significantly between the play and control groups, participants in both conditions reported a general uplift in their sense of innovativeness. This outcome is likely due to the solution-focused nature of the workshop itself, which encouraged idea generation across all teams. Importantly, this does not diminish the broader benefits of playfulness, which consistently supported engagement, belonging, and adaptability.

Together, these findings confirm that well-designed playful activities can meaningfully influence how employees feel about their work, their colleagues, and their readiness to navigate future challenges. At the same time, they highlight that play should not be a one-off activity. At the same time, they highlight a critical practical implication: to realise enduring value, play is best understood not as a one-off intervention, but as an ongoing organisational practice.

FINAL RECOMMENDATIONS

The findings of this project clearly show that when employees experience their work as playful, even briefly, they feel more connected to their colleagues, more energised and engaged in their work, and more capable of adapting to new challenges. These effects were consistently observed across both controlled and real-world settings, demonstrating that play meaningfully supports key drivers of workplace culture. At the same time, the short-term nature of these benefits highlights an important insight: play is most effective not as a one-off intervention, but when it becomes a regular part of how teams collaborate. Together, the results provide the first quantitative evidence that integrating play into everyday work practices can enhance workplace culture in tangible ways, offering a practical path forward for organisations seeking to build more connected, motivated, and adaptable teams.

For Culture Hero

1. Strengthen focus on sustained, not one-off, play-based engagement

Short-term improvements in belonging, engagement, and adaptability were evident immediately following the intervention, but these effects had largely faded after five weeks. This pattern indicates that the benefits of play, while meaningful, are not sustained in the absence of continued exposure.

Although this study did not directly test ongoing integration, the observed decline following a single workshop suggests that one-off interventions may be insufficient to maintain gains over time. Instead, the findings point to the likely importance of incorporating small, regular playful practices into everyday work.

For Culture Hero, this highlights a strategic opportunity to extend beyond standalone workshops by supporting organisations to embed ongoing, low-intensity play-based practices that can help sustain the positive outcomes observed.

2. Emphasise play's strongest demonstrated benefits

Across all data, the largest effects were on work engagement, followed by innovativeness and belonging. Culture Hero can highlight these specific outcomes in communications and program design, staying close to the evidence while showing the value of play-based collaboration.

3. Provide simple tools that teams can use independently

Given that the benefits observed in this study diminished after the workshop ended, the findings suggest that sustaining these outcomes requires ongoing engagement rather than one-off exposure. In this context, Culture Hero could support organisations by offering lightweight prompts, templates, or micro-activities that teams can integrate into meetings or collaborative tasks without external facilitation. This would enable more regular, low-intensity engagement with play, aligning with the conditions likely needed to sustain the positive outcomes observed.

For Organisations Seeking to Enhance Workplace Culture

1. Integrate small moments of play into regular team routines

The study showed that playfulness can enhance engagement, belonging, and adaptability in the short term, with effects diminishing once the intervention ended. This pattern suggests that maintaining these benefits requires regular, rather than one-off, engagement. Incorporating brief creative prompts, open-ended questions, or playful warm-ups into existing meetings provides a practical way to sustain these outcomes, helping employees think more openly and connect more easily as part of their everyday work.

2. Use play purposefully when preparing teams for change or problem-solving

Participants reported higher adaptability and engagement immediately following playful collaboration. This indicates that play can be particularly valuable in moments that demand flexible thinking and openness to new ideas. Introducing play during planning, brainstorming, or when navigating new challenges may help teams engage more confidently with uncertainty, positioning play as a targeted tool rather than a general add-on.

3. Treat innovation as a collaborative process, not a result of play alone

Both play and non-play groups reported increases in perceived innovativeness, likely to reflect the solution-focused nature of the task itself. This suggests that structured collaboration plays a central role in supporting innovative thinking. Within this context, play is best understood as a complementary element enhancing engagement and openness rather than a standalone driver of innovation. Organisations can therefore use play to enrich existing collaborative processes rather than replace them.

As this work comes to a close, one message stands out: play gives organisations a practical way to nurture healthier, more connected, and more forward-looking teams. Even small playful moments can spark the curiosity, energy, and collaboration that underpin a strong workplace culture. When organisations choose to keep these moments alive in everyday work, they create the conditions for people to engage more fully, learn more openly, and imagine what is possible together.

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Appendix

Table 3: Measurement items used for the controlled study

Sense of Belonging (La Guardia et al., 2000) (Cronbach's alpha (α)=0.80)	1. I liked the people I interacted with in my group during the ideation session. 2. I got along with the people in my group that I met during the ideation session. 3. I pretty much kept to myself when I participated in the ideation session. 4. I considered the people I interacted with in my group to be my friends when I participated in the ideation session. 5. Team members in my group cared about my input. 6. I didn't feel close to many people in my group during the ideation session. 7. The people I interacted with in my group during the ideation session didn't seem to like me very much. 8. The people in my group were generally friendly towards me during the ideation session.
Work Engagement (Schaufeli et al., 2006) (Cronbach's alpha (α)=0.88)	1. I felt like collaborating with the other members of my team in the ideation session. 2. I felt full of energy during my participation in the ideation session. 3. I felt strong and vigorous when I was participating in the ideation session. 4. I was enthusiastic about my participation in the ideation session. 5. I was proud of my participation in the ideation session. 6. During the ideation session online, I got carried away. 7. I was immersed in the ideation session. 8. I felt happy during the ideation session.
Learning Adaptability (Ployhart & Bliese, 2006) (Cronbach's alpha (α)=0.94)	1. After doing this session, I feel more confident that I am able to take responsibility for acquiring new skills. 2. After doing this session, I feel like I would enjoy learning new approaches to problem-solving. 3. After doing this session, I feel like I will take action to improve my collaborative performance deficiencies. 4. After doing this session, I feel like I will quickly adapt myself by gaining new information and skills to refine and enhance my ideas. 5. After doing this session, I feel like I will continuously learn and apply new skills to adapt to problems. 6. After doing this session, I feel like I will be able to adapt my ideas by learning and incorporating new information as it becomes available. 7. After doing the session, I feel like I will proactively learn new idea generation skills before they are needed.
Sense of Producing Innovative Solution (Janssen, 2000) (Cronbach's alpha (α)=0.89)	1. My group members came up with new ideas to address the issue that required solving. 2. My group members explored new methods and techniques to solve the issue. 3. My group members developed original solutions to address the issue. 4. My group made sure that they inspired key group members to be enthusiastic about developing

	innovation ideas. 5. My group members transformed innovative ideas into useful applications. 6. My group members introduced innovative ideas into the team environment in a systematic way.
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Table 4: Comparison of means for the investigative dependent variables in Study 2

	Sense of Producing Innovative Solution			Sense of Belonging			Work Engagement			Learning Adaptability		
	Play	Non-play collab	Pure control	Play	Non-play collab	Pure control	Play	Non-play collab	Pure Control	Play	Non-play collab	Pure control
No of Participants	45	40	42	45	40	42	45	40	42	45	40	42
Mean	5.16	5.50	5.26	5.81	6.21	5.85	5.19	5.57	5.49	5.22	5.57	5.35
Std. Deviation	1.02	1.18	1.06	0.86	0.76	1.03	0.98	1.02	1.09	1.04	1.22	1.13

Table 8: Measurement items used for the pre survey used in field experiment study (Study 3)

Sense of Belonging (La Guardia et al., 2000) (Cronbach's alpha (α)=0.45)	1. I usually feel that I am a valued member of my team in my organisation. 2. I usually feel a sense of connection with the people I work with in my organisation.
Work Engagement (Schaufeli et al., 2006) (Cronbach's alpha (α)=0.81)	1. I usually feel full of energy when working with others in my organisation. 2. I usually feel enthusiastic when working with others in my organisation.
Learning Adaptability (Ployhart & Bliese, 2006) (Cronbach's alpha (α)=0.64)	1. I usually feel confident in my ability to take responsibility for learning new skills when facing challenges in our organisation. 2. I usually adapt my ideas by learning and incorporating new information as it becomes available in our organisation.
Sense of Producing Innovative Solution (Janssen, 2000) (Cronbach's alpha (α)=0.77)	1. I usually come up with new ideas to address the issue that needs solving within our organisation. 2. I usually systematically introduce innovative ideas into the team environment within our organisation.

Table 9: Measurement items used for the post survey used in field experiment study (Study 3)

Playfulness (Cronbach's alpha (α)=0.86)	1. This workshop session made me feel like I was entering an imaginary or parallel world. 2. The activity during the workshop session unfolded in a way that gradually built excitement. 3. My group was free to establish how we would work together in this session, including the rules and principles. 4. The activity during the workshop session included spontaneous or unpredictable moments that added to the experience. 5. The activity during the workshop session encouraged creativity and discovery over achieving a fixed outcome.
Sense of Belonging (La Guardia et al., 2000) (Cronbach's alpha (α)=0.77)	1. Moving forward, I will feel like a valued member of my team in my organisation. 2. Moving forward, I will feel a sense of connection with the people I work with in my organisation.
Work Engagement (Schaufeli et al., 2006) (Cronbach's alpha (α)=0.86)	1. Moving forward, I will feel full of energy when working with others in my organisation. 2. Moving forward, I will feel enthusiastic about working with others in my organisation.
Learning Adaptability (Ployhart & Bliese, 2006) (Cronbach's alpha (α)=0.81)	1. Moving forward, I will feel confident in taking responsibility for acquiring new skills when needed to support our organisation. 2. Moving forward, I will adapt ideas by learning and incorporating new information to support our organisation.
Sense of Producing Innovative Solution (Janssen, 2000) (Cronbach's alpha (α)=0.88)	1. Moving forward, I will come up with new ideas to address future challenges in our organisation. 2. Moving forward, I will systematically introduce innovative ideas into the team environment within our organisation.

Table 10: Descriptive statistics and independent samples T-test for Playfulness (Play vs. Control) demonstrating successfulness of manipulation check in Study 3

Group Statistics					
Condition	Group	N	Mean	Std. Deviation	Std. Error Mean
Play	Play	45	6.3956	0.56325	0.08396
	Control	53	5.483	0.91352	0.12548

Independent Samples Test

Condition	Variance Assumption	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	CI Lower	CI Upper
Play	Equal variances assumed	5.824	96	<.001	<.001	0.91254	0.15668	0.60153	1.22354
	Equal variances not assumed	6.044	88.114	<.001	<.001	0.91254	0.15098	0.6125	1.21258

Note: $*=p<0.05$ (significance level)

Figure 4: Change in sense of belonging from pre-to-post workshop for the play and control group in Study 3.

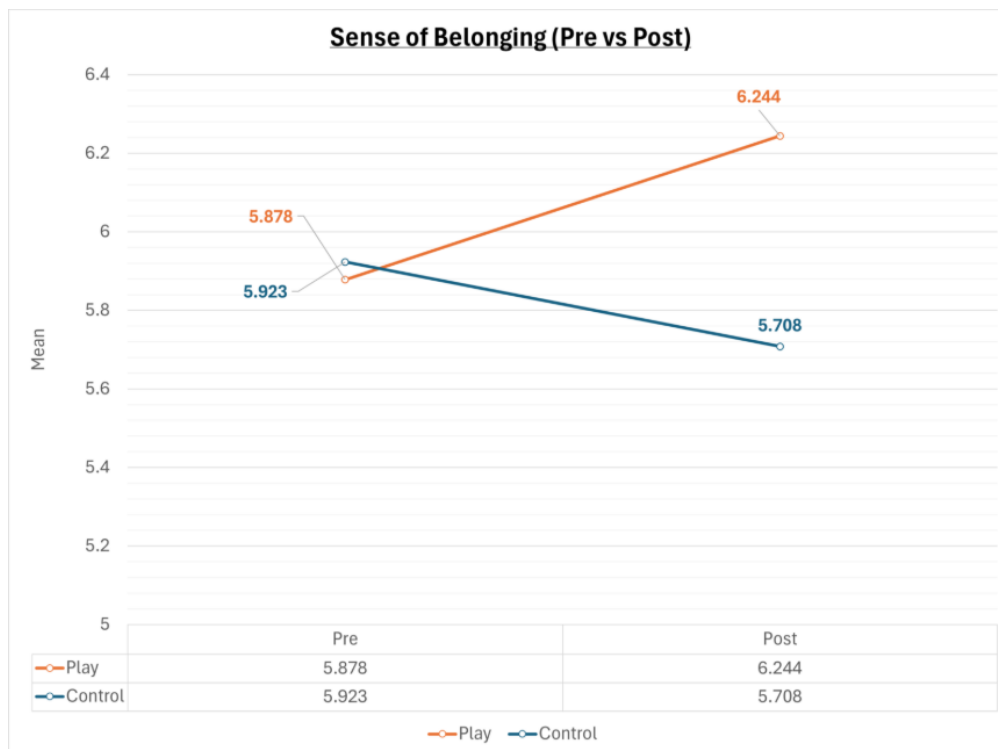


Figure 5: Change in work engagement from pre-to-post workshop for the play and control group in Study 3.

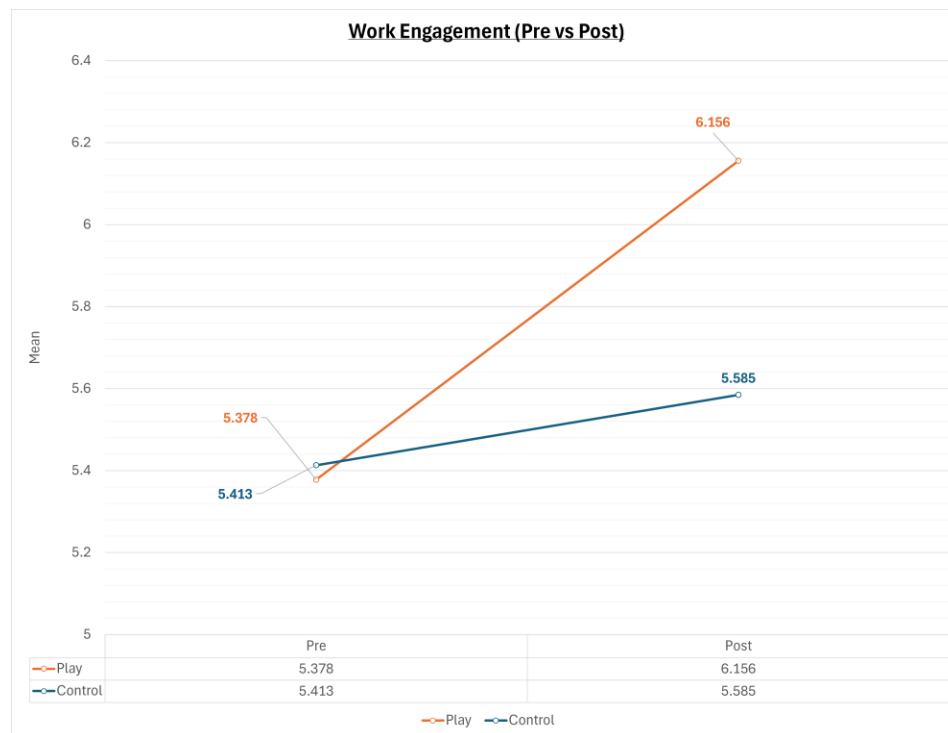


Figure 6: Change in learning adaptability from pre-to-post workshop for the play and control group in Study 3.

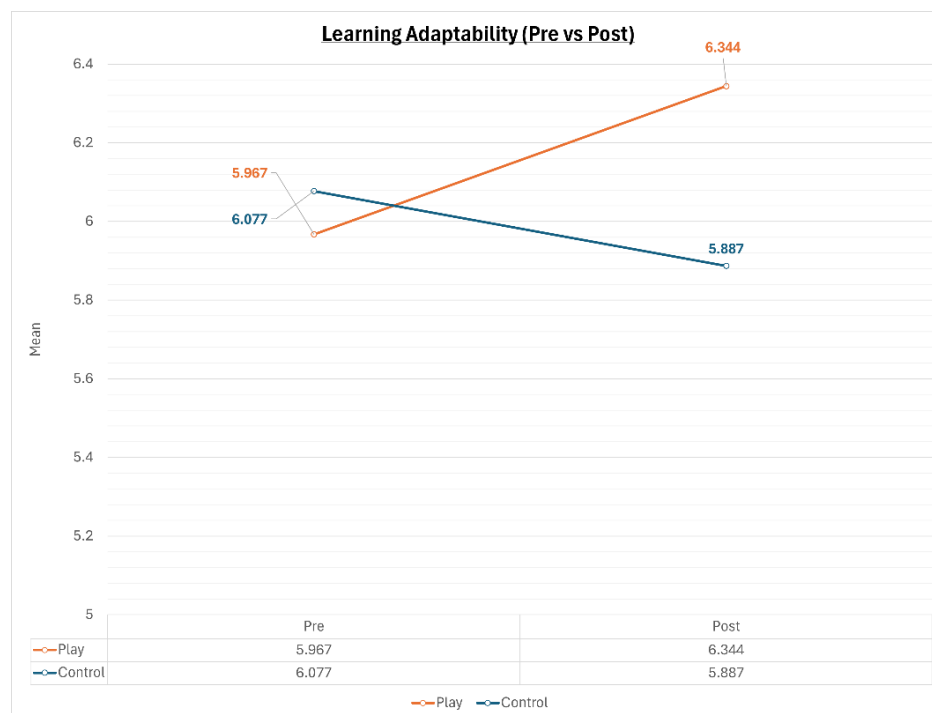
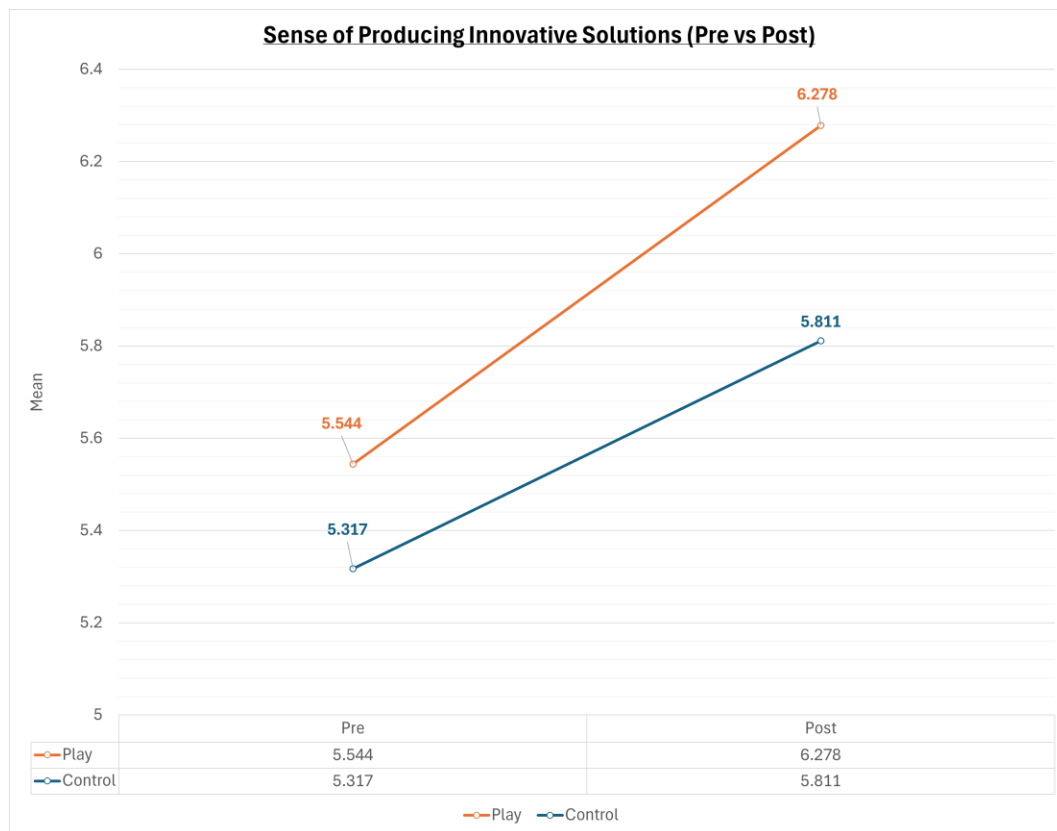


Figure 7: Change in sense of producing innovative solutions from pre-to-post workshop for the play and control group in Study 3.



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