GAMIFYING HR SYSTEMS TO BOOST EMPLOYEE ENGAGEMENT: A USER-CENTERED DESIGN CASE STUDY

MENGGAMIFIKASI SISTEM HR UNTUK MENINGKATKAN KETERLIBATAN KARYAWAN: STUDI KASUS DESAIN BERPUSAT PADA PENGGUNA

Vyoni Reviolencia Octarivinski[1], Wawan Dhewanto[2]
School of Business and Management, Institut Teknologi Bandung[1,2]
vyonireviolencia@gmail.com[1]

ABSTRACT

Employee engagement is a critical driver of organizational success, yet many Human Resource Information Systems (HRIS) are still perceived as transactional tools, with employees showing limited voluntary use beyond mandatory functions. This study examines SF HRIS (pseudonym), where underutilization of interactive features was identified as a user experience (UX) gap. To address this challenge, the study applied Design Thinking as the research design, guiding a structured process of Empathize, Define, Ideate, Prototype, and Test. Through a qualitative case study involving five participants across three user personas, the research identified key pain points such as lack of recognition, minimal incentives, and flat interaction design. Based on these insights, gamification was proposed as a UX strategy to enhance engagement. A prototype was developed with elements including points, leaderboards, achievements, and rewards. Feedback was collected through semi-structured interviews and analyzed thematically, with responses categorized using TAM constructs (Perceived Usefulness, Perceived Ease of Use, Behavioral Intention) as qualitative interpretive lenses. Findings suggested that participants perceived the gamified features as useful, intuitive, and motivating, highlighting improvements in interaction, navigation, and alignment with personal and team goals. The study concludes that gamification can effectively address UX gaps in HRIS by transforming systems from transactional tools into engaging employee experience platforms. Methodologically, the research demonstrates how Design Thinking and qualitatively adapted TAM constructs can be combined to support user-centered innovation in HR technology.
Keywords: *Gamification, HRIS, Employee Engagement, Design Thinking, Technology Acceptance Model, User-Centered Design*

ABSTRAK

Keterlibatan karyawan merupakan faktor kunci keberhasilan organisasi, namun banyak Sistem Informasi Sumber Daya Manusia (HRIS) masih dianggap sebagai alat transaksional, dengan karyawan menunjukkan penggunaan sukarela yang terbatas di luar fungsi wajib. Studi ini menganalisis SF HRIS (nama samaran), di mana kurangnya penggunaan fitur interaktif diidentifikasi sebagai celah pengalaman pengguna (UX). Untuk mengatasi tantangan ini, studi ini menerapkan Design Thinking sebagai desain penelitian, memandu proses terstruktur Empathize, Define, Ideate, Prototype, dan Test. Melalui studi kasus kualitatif yang melibatkan lima peserta dari tiga persona pengguna, penelitian mengidentifikasi poin-poin masalah utama seperti kurangnya pengakuan, insentif minimal, dan desain interaksi yang datar. Berdasarkan wawasan ini, gamifikasi diusulkan sebagai strategi UX untuk meningkatkan keterlibatan. Sebuah prototipe dikembangkan dengan elemen termasuk poin, papan peringkat, pencapaian, dan hadiah. Umpan balik dikumpulkan melalui wawancara semi-terstruktur dan dianalisis secara tematis, dengan respons dikategorikan menggunakan konstruksi TAM (Kegunaan yang Dirasakan, Kemudahan Penggunaan yang Dirasakan, Niat Perilaku) sebagai lensa interpretatif kualitatif. Temuan menunjukkan bahwa peserta menganggap fitur gamifikasi sebagai berguna, Intuitif dan memotivasi, menyoroti perbaikan dalam interaksi, navigasi, dan keselarasan dengan tujuan pribadi dan tim. Studi ini menyimpulkan bahwa gamifikasi dapat secara efektif mengatasi celah UX dalam HRIS dengan mengubah sistem dari alat transaksional menjadi platform pengalaman karyawan yang menarik. Secara metodologis, penelitian ini menunjukkan bagaimana Design Thinking dan konstruksi TAM yang disesuaikan secara kualitatif dapat digabungkan untuk mendukung inovasi berpusat pada pengguna dalam teknologi HR.
Kata kunci: Gamifikasi, HRIS, Keterlibatan Karyawan, Design Thinking, Model Penerimaan Teknologi, Desain Berpusat pada Pengguna

INTRODUCTION

Employee engagement plays a central role in human resource (HR) strategy, influencing productivity, satisfaction, and overall organizational success (Mishra & Biswal, 2024; Yashaswini, 2023). Engaged employees tend to demonstrate higher commitment and performance, leading to better business outcomes (Tiwari et al., 2018). Technological advancements further support engagement by automating repetitive tasks and enabling employees to focus on more meaningful work (PwC, 2024). Providing the right tools and training enhances both competence and satisfaction, creating conditions for sustainable performance.

Gamification—originally defined as the use of game elements in non-game contexts—has increasingly been recognized for its potential to enhance engagement in HR systems by making tasks more interactive and rewarding (Vetushinskiy, 2020; Silic et al., 2020). Beyond entertainment, gamification addresses both emotional and work-related needs, boosting motivation, fairness, and recognition (Girdauskiene et al., 2022; Ishaq et al., 2019). Its application has improved outcomes in various HR functions, including recruitment, performance management, and training (Murawski, 2020; Varis et al., 2023). Gallup (2018) warns that disengagement remains costly, with traditional management approaches often proving insufficient. Gamification can counter this by fostering a culture of growth and participation (Ishaq et al., 2019).

As HR software evolves from purely administrative tools to platforms that actively shape workplace culture, gamification emerges as a strategic advancement, turning routine HR interactions into meaningful experiences. This study focuses on **SF HRIS** (pseudonym), an Indonesian HR platform developed by **Data Corp** (pseudonym). While the platform performs effectively in administrative functions, internal analytics and employee survey results indicate underutilization due to a UX gap, whereas employees perceive the system as transactional, with limited intrinsic motivation for voluntary use.

The need for a scalable, research-based digital engagement strategy is pressing as Data Corp expands regionally. Survey data from 2024 revealed that only 49.01% of employees participated, with 18.39% falling below the engagement threshold. Additional feedback highlighted concerns around compensation, career opportunities, and work-life balance, signaling gaps in the overall employee experience. The absence of gamification, coupled with minimal user experience (UX) research, represents a missed opportunity for innovation. Design decisions have often relied on assumptions rather than systematic user input, reducing the likelihood of adoption and impact.

Drawing on the work of Dhewanto et al. (2012), innovation capability is a critical intangible resource that supports business performance when underpinned by collaboration, knowledge integration, and technology development. From a resource-based view, such capabilities can have long-term effects on organizational competitiveness (Wang et al., 2019). For HR platforms, aligning innovation with strategic objectives is essential, as these systems are expected to deliver both operational efficiency and enhanced employee engagement (Linawati et al., 2024; Vaskiv, 2022).

This study proposes that integrating gamification through a user-centered design approach can transform SF HRIS from a transactional system into a strategic engagement tool.

However, as Kivisaari (1991) notes, the success of product innovation depends heavily on timely execution and active top management sponsorship, which ensures adequate resources and strategic alignment. Without these, innovation initiatives often face delays, low adoption, and misalignment with organizational priorities.

RESEARCH METHOD

This study uses primary and secondary data obtained from internal employee engagement surveys at **Data Corp** (pseudonym) and reference literature on **Design Thinking**, **Gamification**, and the **Technology Acceptance Model (TAM)**.

Primary data was collected through semi-structured written interviews with **five internal user personas** representing different roles, tenures, and engagement patterns with the SF HRIS mobile application:

1. **AC – HR Manager (10 years) | HRIS Admin**
Sees low adoption of engagement features; UI feels cluttered; wants clearer discoverability.

2. **RA – Senior Marketing (8 years) | Active User**
Enjoys using surveys and social features; frustrated by low visibility and response rates; seeks more recognition and tangible rewards.

3. **BF – Senior PM (5 years) | Passive User**
Primarily uses ESS for routine approvals; finds the design static; wants cleaner layouts, contextual guidance, and visible acknowledgment for contributions.

4. **MK – Sales Supervisor (6 years) | Active User**
Uses ESS for mobile convenience and team performance tracking; motivated by functional rewards, friendly competition, and team-based challenges.

5. **AW – Purchasing Manager (8 years) | Passive User**
Uses ESS only for essential tasks; finds the interface cluttered and uninviting; prefers simple flows with small, effortless rewards.

Secondary data was gathered from books, peer-reviewed journals, and industry reports on HRIS adoption, employee engagement, and gamification in enterprise systems.

The Design Thinking framework (Brown, 2009) was applied **as the overall research design**, guiding the process from Empathize to Test. TAM constructs were adapted qualitatively as interpretive categories to analyze user feedback:

- **Empathize** – Understanding user needs and challenges by developing empathy maps for all five personas based on interview and survey findings, identifying pain points, motivations, and behavioral patterns.

- **Define** – Synthesizing empathy findings into problem statements that articulate the engagement gap in SF HRIS.

- **Ideate** – Generating potential gamification concepts to address the defined problems, ensuring alignment with user expectations and organizational objectives.

- **Prototype** – Creating a confidential, anonymized interactive mock-up of selected gamification elements for internal testing while protecting product and company confidentiality.

- **Test** – Conducting asynchronous feedback sessions with the five personas to assess perceived usefulness (PU), perceived ease of use (PEOU), and behavioral intention (BI) using TAM as the evaluation framework.

The overall research process was structured using a Design Thinking framework, as illustrated in **Figure 1**, which outlines the sequential stages applied in this study from Empathize to Test.
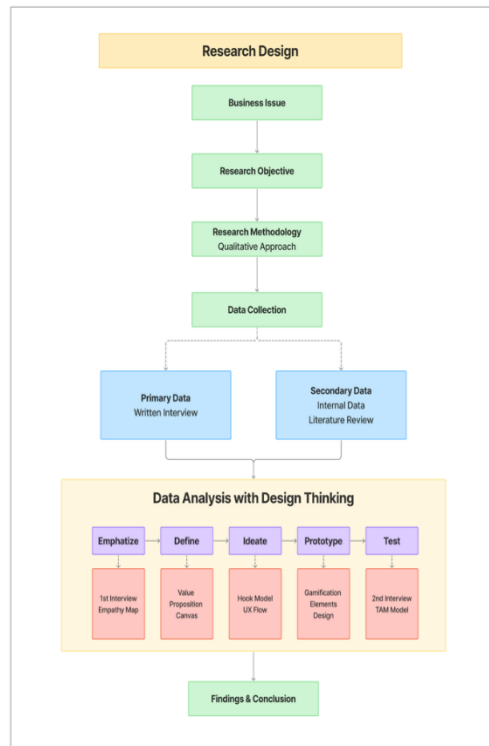

Figure 1. Research Design Integrating Design Thinking Approach
Source: Author (2025)

This combined approach of **Design Thinking** and **TAM analysis** ensures that the proposed gamification elements are user-centered, strategically aligned, and validated against behavioral adoption criteria.

RESULT AND DISCUSSION

This section presents the research findings using the five stages of the Design Thinking framework — Empathize, Define, Ideate, Prototype, and Test — applied to the improvement of gamification elements in SF HRIS. Each stage integrates insights from the five user personas, internal survey data, and relevant literature.

1. Empathize Stage

The Empathize stage involved understanding users through observation, interviews, and analysis of system usage patterns. Five distinct user personas were developed, representing a spectrum of interaction styles and motivations:

1. **AC – HRIS Admin:** Sees low adoption of engagement features; UI feels cluttered and lacks discoverability.
2. **RA – Active User:** Actively engages in surveys and social features but is frustrated by low visibility and recognition.
3. **MK – Active User:** Motivated by friendly competition and tangible rewards; prefers mobile convenience.
4. **BF – Passive User:** Uses ESS only for approvals; prefers cleaner layouts and visible acknowledgment for contributions.
5. **AW – Passive User:** Focuses solely on essential tasks; seeks simplicity and effortless reward mechanisms.

These personas were grounded in direct quotes and behavioral observations, ensuring that subsequent design decisions would be rooted in real user needs rather than assumptions. This aligns with IDEO's (n.d.) principle that design thinking begins by deeply understanding the people for whom solutions are being developed.

2. Define Stage

Building on the Empathize stage, insights from the five user personas were synthesized into problem statements grounded in their direct feedback and observed behaviors:

- Employees interact with SF HRIS primarily for transactional purposes, resulting in underutilization of strategic features.
- The lack of recognition and visible progress indicators diminishes

motivation for continued engagement.
- The current UI/UX design does not facilitate discoverability of engagement-related features.
- Limited integration of competitive and social mechanisms reduces opportunities for collaborative motivation.

To ensure the design remains **user-centered**, these insights were mapped onto the **Value Proposition Canvas** (Osterwalder et al., 2014), aligning *user pains, gains, and jobs* with targeted gamification solutions. This mapping directly reflected the diversity of user types—ranging from HRIS admins to active and passive employees—ensuring that the solution addressed both functional requirements and emotional motivators. Figure 2 presents the Value Proposition Canvas developed during the Define stage, aligning user pains, gains, and jobs with proposed gamification solutions.
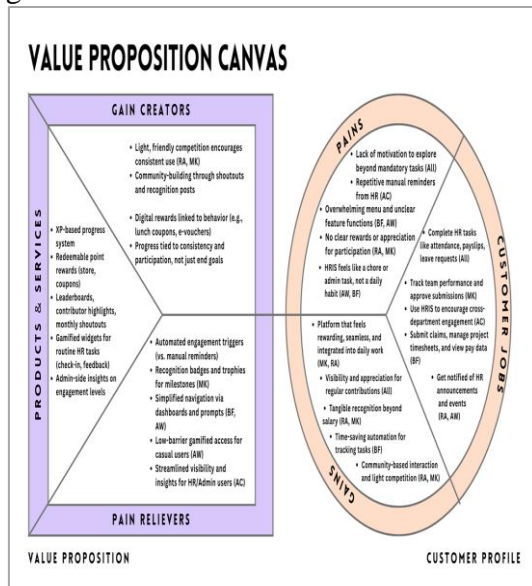

Figure 2. Value Proposition Canvas
Source: Author (2025)

This stage reflects Kivisaari's (1991) assertion that product innovation requires clear problem framing to ensure timely and aligned execution. The final challenge statement emphasized that *employees primarily use SF HRIS for mandatory tasks, limiting its potential as a platform for recognition, motivation, and continuous engagement*. This became the foundation for the Ideate stage, where proposed elements were shaped around the real needs and motivations of end-users.

Problem: Lack of recognition → Achievements; Minimal incentives → XP points; Flat interaction → Leaderboards; Transactional perception → Rewards system.

3. Ideate Stage

Potential solutions were brainstormed based on gamification literature and identified user needs. The selected concepts aimed to: **(1)** provide immediate visual feedback and progress tracking, **(2)** incorporate achievement milestones for motivation, **(3)** enable friendly competition through leaderboards, and **(4)** facilitate reward redemption to connect engagement with tangible outcomes. To ensure seamless integration into the SF HRIS mobile application, a user flow chart was created. This chart maps navigation paths and interaction points where gamification concepts are embedded, ensuring alignment with routine HRIS functions without introducing unnecessary complexity. The flow also incorporates feedback loops inspired by the Hook Model, where triggers, actions, rewards, and investment opportunities work together to reinforce user motivation. **Figure 3** illustrates the proposed user flow, showing how these gamification elements are embedded into the SF HRIS interface to guide users smoothly from initial interaction to engagement-driven outcomes.
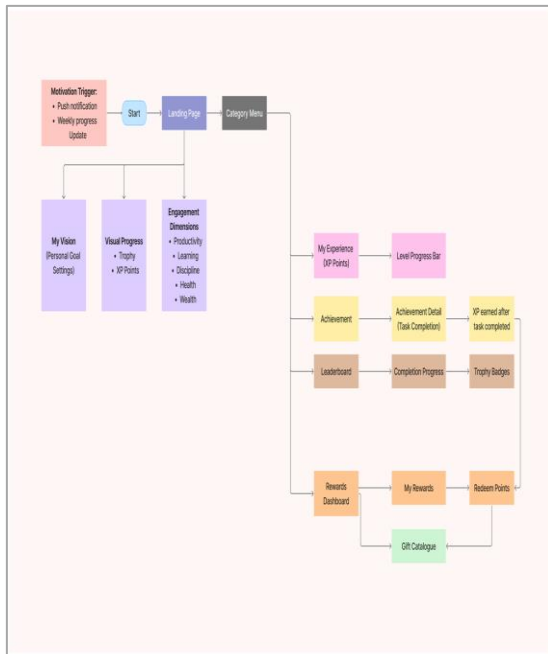
Figure 3. User Flow Chart for Gamification Integration in SF HRIS
Source: Author (2025)

4. Prototype Stage

A **confidential interactive mock-up** was created to test the proposed gamification elements without revealing proprietary UI designs. The prototype included four interconnected elements:

a. Home Landing
- Acts as a personalized dashboard with engagement points, recent activity, and motivational triggers.
- Designed for quick recognition of progress and next actions.

b. Achievement
- Tracks progress in key engagement categories (Learning, Collaboration, Productivity).
- Uses visual milestones and notifications to reinforce accomplishment.

c. My Experience (XP) Points
- Displays level progression and total engagement points.
- Unlocks reward options as levels increase, providing both short-term and long-term goals.

d. Leaderboard
- Shows rankings for individuals and teams based on engagement points.
- Includes filters by time period and activity type to promote fair and relevant competition.

5. Test Stage

The prototype was shared with the five personas in asynchronous sessions. Feedback was analyzed thematically and categorized using TAM constructs (PU, PEOU, BI) as qualitative lenses. This revealed that:

- **Perceived Usefulness (PU)** – Respondents agreed that the gamification elements, particularly the leaderboard and achievement milestones, could increase engagement and motivation through visible recognition and friendly competition. AC noted the value of progress tracking for monitoring employee participation, while MK emphasized that competition would drive team performance.
- **Perceived Ease of Use (PEOU)** – Both active and passive users found the navigation intuitive and the reward mechanisms simple to understand. AW appreciated the streamlined process for quick actions, and BF valued the cleaner layout but suggested adding contextual tips to guide first-time users.
- **Behavioral Intention (BI)** – Most participants indicated they would use the new features regularly. RA expressed strong interest in posting more frequently if recognition was prompt, while AW and BF stated they would explore beyond essential tasks if rewards were quick and effortless to obtain.

Overall, thematic feedback categorized through TAM constructs (PU, PEOU, BI) indicated that

participants perceived the features as useful, intuitive and motivating. They highlighted improved motivation, clearer navigation and greater opportunities for interaction. Several participants also noted that the redesigned interface felt more rewarding and better aligned with both personal and team goals, while remaining easy to use. To illustrate how these improvements translate from the existing Employee Self-Service (ESS) system to the gamified version, **Table 1** summarizes the changes in design, functionality, and expected impact across key engagement dimensions. While the complete prototype visuals are confidential and provided only to the editorial team for review purposes, this table captures the functional enhancements and user-centered improvements identified through the testing process.

Table 1. Summary of Functional and Engagement Improvements with Gamification, as Identified Through User-Centered Testing

Aspect	Before Gamification	After Gamification
Visual Design & UI	Functional but perceived as cluttered, static, and lacking engagement.	Simplified and dynamic interface with visual cues (streaks, trophies, progress bars) to enhance clarity and motivation.
Usage Motivation	Users interact only when necessary (e.g., leave requests, payslips). No incentives to return regularly.	Users are motivated by XP points, levels, and leaderboard. Features encourage regular engagement through goal-setting and progression feedback.
Personal Goal Setting	No personal development or goal-tracking features available.	"My Vision" feature allows users to set personal goals aligned with company values, fostering a sense of ownership and purpose.
Feedback & Rewards	Minimal real-time feedback; no rewards or recognition integrated into the app.	Includes point accumulation, tiered levels, reward redemption, and achievements, offering immediate and delayed gratification.
Social Interaction	Limited interaction beyond system use. Social feed exists but underutilized.	Gamification layered onto social feed and dashboard to spark healthy competition, shared progress, and team recognition.
Engagement Analytics	Admins can only monitor static usage data (e.g., login logs).	Admins gain insights from leaderboard and gamified activity data, allowing for targeted initiatives to increase engagement.
User Personas Impact	Passive users remain disengaged; active users feel limited by the lack of novelty and recognition.	All user types find relevant entry points: passive users enjoy ease of entry (e.g., streaks), while active users respond positively to competitive mechanics.

Source: Author, 2025

CONCLUSION

This study addressed the problem of low voluntary engagement in SF HRIS, identified as a **user experience (UX) gap** where employees perceived the system as transactional rather than engaging. By applying **Design Thinking as the research design**, the study explored user needs, reframed the problem, and developed gamification elements—such as points, leaderboards, achievements, and rewards—to enhance motivation and recognition.

Feedback was gathered through semi-structured interviews and analyzed thematically. To structure interpretation, the study adapted **TAM constructs (PU, PEOU, BI)** as qualitative categories. Findings suggested that participants perceived the gamified features as useful, intuitive, and motivating, while also noting improvements in navigation, interaction, and alignment with both personal and team goals.

The study contributes both to practice—by demonstrating how gamification can address UX gaps in HRIS—and to research—by showing how Design Thinking and qualitatively adapted TAM constructs can be integrated in user-centered HR technology innovation.

REFERENCES

Dhewanto, W., Nurul, A., & Ratnaningrum, I. (2012). Open innovation in Indonesia manufacturing sector: An exploratory study. *Procedia Economics and Finance*, 4, 223–233. https://doi.org/10.1016/S2212-5671(12)00336-7

Gallup. (2018). *State of the global workplace*. Gallup Press.

Gartner Peer Insights. (2025). *Gartner Peer Insights 'Voice of the Customer': Human Capital Management Suites*. Gartner, Inc.

Girdauskiene, L., Lukosaitis, M., & Jakstys, M. (2022). Gamification for employee engagement: A systematic literature review. *Sustainability*, 14(3), 1620. https://doi.org/10.3390/su14031620

Hargadon, A., & Douglas, Y. (2001). When innovations meet institutions: Edison and the design of the electric light. *Administrative Science Quarterly*, 46(3), 476–501.
https://doi.org/10.2307/3094872

IDEO. (n.d.). *Design thinking*. Retrieved from https://designthinking.ideo.com

Ishaq, M. I., Hussain, N., Asim, S., & Cheema, F. E. A. (2019). Enhancing employee engagement through gamification: The mediating role of motivation. *International Journal of Academic Research in Business and Social Sciences*, 9(3), 93–106. https://doi.org/10.6007/IJARBSS/v9-i3/5673

Kivisaari, S. (1991). *Product innovation in large high-technology firms: A study of the business development function*. Helsinki University of Technology.

Linawati, D., Aswad, M., & Azis, Y. (2024). Talent management phenomenon in Indonesia—Systematic literature review. *Jurnal Borneo Administrator*, 20(1), 29–42. https://doi.org/10.24258/jba.v20i1.1375

Mishra, A., & Biswal, M. R. (2024). Employee engagement strategies in the digital workplace. *Human*

Resource Development International, 27(1), 44–62. https://doi.org/10.1080/13678868.2023.2259958

Murawski, M. (2020). Gamification in human resource management: The role of game elements in employee motivation and engagement. *International Journal of Human Resource Studies*, 10(3), 45–58. https://doi.org/10.5296/ijhrs.v10i3.17377

PwC. (2024). *Workforce of the future: The competing forces shaping 2030*. PricewaterhouseCoopers.

Silic, M., Barlow, J., & Back, A. (2020). Evaluating the impact of gamification on knowledge sharing in organizations. *Computers in Human Behavior*, 104, 106174. https://doi.org/10.1016/j.chb.2019.106174

Suliyanto, & Rahab. (2012). The role of market orientation and learning orientation in improving innovativeness and performance of small and medium enterprises. *Asian Social Science*, 8(1), 134–145. https://doi.org/10.5539/ass.v8n1p134

Tiwari, S., Nafees, L., & Krishnan, O. (2018). Gamification in management education: A systematic review and future research directions. *The International Journal of Management Education*, 16(3), 468–478. https://doi.org/10.1016/j.ijme.2018.06.002

Trott, P. (2020). *Innovation management and new product development* (7th ed.). Pearson Education.

Varis, M., Palomäki, J., & Hytönen, K. (2023). Gamified feedback in workplace learning: A field experiment. *Computers & Education*, 192, 104637. https://doi.org/10.1016/j.compedu.2022.104637

Vaskiv, A. (2022). Digital transformation in human resource management: Challenges and opportunities. *Human Resource Management Review*, 32(2), 100857. https://doi.org/10.1016/j.hrmr.2021.100857

Vetushinskiy, A. (2020). Gamification as a tool to improve employee performance: A case study. *Journal of Business Research*, 116, 440–447. https://doi.org/10.1016/j.jbusres.2019.09.060

Wang, Z., Cao, J., & Ye, X. (2019). Resource-based view and innovation capability: An empirical study. *Journal of Business Research*, 94, 1–13. https://doi.org/10.1016/j.jbusres.2018.08.020

Yashaswini, R. (2023). Enhancing employee engagement in hybrid work environments. *Journal of Human Resource and Sustainability Development*, 11(2), 57–70. https://doi.org/10.4236/jhrss.2023.112005