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**Embedding Sustainability in Hotel Operations:
A Practice-Based Learning Perspective**

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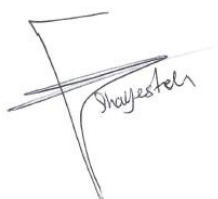
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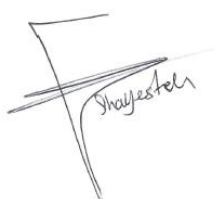
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I am the author of this thesis, and the work described therein was carried out by myself personally.

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This journey has been a reminder of resilience, support, and the importance of sustaining one another through challenging times.

Abstract

Sustainability in hotels is frequently promoted through corporate messaging, yet for employees working behind the scenes it unfolds amid time pressures, guest expectations, and operational constraints. Having experienced this environment first-hand, I became interested in how hotel employees understand and enact sustainability within the realities of daily service work. Employees interact with guests, manage resources, and navigate competing demands, placing them at the centre of sustainability implementation. Yet their role in shaping sustainable practices remains underexplored in hospitality research.

The overarching aim of this thesis is to explore how sustainability becomes embedded as an organisational process in hotels by examining the employee-mediated mechanisms that translate stated commitments into consistent everyday practice. Taking a qualitative, interpretivist approach, the research draws primarily on semi-structured interviews and an embedded single case study within the UK hotel sector. This design enables an examination of sustainability as a lived organisational phenomenon shaped through everyday interactions, informal learning, operational pressures, and shifting workplace conditions.

Across the thesis, the findings reveal the complex ways in which employees make sense of and engage with sustainability. Their motivation to act sustainably is influenced by organisational culture, leadership behaviour, and workload demands. Their sustainability knowledge emerges largely through informal and experiential learning, circulating unevenly across roles and departments. Organisational learning processes are often fragmented, affecting how sustainability cues are noticed, interpreted, and integrated into daily practice. These insights demonstrate that embedding sustainability depends not only on formal initiatives but on the everyday mechanisms through which employees interpret, enact, and reinforce sustainable behaviours.

Overall, this thesis contributes to hospitality sustainability scholarship by deepening the understanding of how organisational actors address a critical organisational

challenge while managing multiple competing demands. It highlights the employee-mediated processes that shape whether sustainability remains rhetorical or becomes routine and offers practical insights to help hotels strengthen the embedding of sustainability within the complexities of daily operations.

Structure of the Thesis

This thesis takes an alternative format in which each chapter in the main body is presented as a research paper with its own distinct theoretical contribution.

Chapter I provides the foundation for the thesis. It outlines the research context, identifies the research gap, establishes the research aim, and presents the philosophical and methodological positioning of the thesis. It also introduces the broader conceptual foundations that guide the three empirical papers.

Chapter II (Paper 1) explores how hotel employees engage with sustainability initiatives, highlighting the conditions that enable or constrain their participation and commitment. Drawing on qualitative interview data with employees across different roles, it examines how engagement is experienced within demanding hotel environments. Its contribution lies in showing that engagement is shaped not only by individual motivation but also by organisational culture, leadership behaviour, and operational pressures, raising important questions about the extent to which engagement translates into meaningful organisational change.

Chapter III (Paper 2) investigates how sustainability knowledge is developed, shared, and applied within hotel settings. Using qualitative interviews with staff in both operational and managerial positions, it explores how different types of knowledge shape the enactment of sustainability in everyday work. Its contribution lies in demonstrating that sustainability knowledge is multifaceted, combining formal instruction, tacit experience, social learning, and temporal awareness, and in raising questions about how such knowledge can be embedded more consistently across organisations.

Chapter IV (Paper 3) analyses how organisational learning mechanisms support or hinder the embedding of sustainability within hotels. Drawing on a qualitative case study of an independent hotel with a stated sustainability commitment, it examines how formal processes and informal practices shape the circulation and retention of sustainability-related knowledge. Its contribution lies in showing that learning often

occurs in a fragmented manner and in highlighting the challenges of translating individual insights into enduring organisational routines and practices.

These papers are connected through reflexive bridges that explain the conceptual progression across the thesis and acknowledge the evolving role of the researcher throughout the study.

Chapter V synthesises the theoretical and practical contributions emerging from the three papers.

Chapter VI concludes the thesis by outlining its limitations and identifying directions for future research.

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Chapter I- Introduction

1.1 General Introduction

The hotel industry is often portrayed as a world of luxury: the relaxing sound of soft music, the smell of fresh linen, fine food served with elegance, the welcoming smile of hotel employees, and the comfort of beds that promise rest and indulgence. However, for employees, the same place is one of long hours, relentless pace, and constant pressure. To create such luxury for guests, hotels consume vast resources, generate significant waste, and present a paradox when viewed through the lens of sustainability. After decades of working in this industry, I have seen how employees sacrifice time, energy, and personal commitments to maintain this standard of perfection, often in conditions that leave little space to consider sustainability beyond the immediate tasks at hand. At times, I tried to make small changes, reusing resources, questioning wasteful routines, or encouraging colleagues to act differently, but these efforts often felt insignificant against the overwhelming demands of cost, efficiency, and service. While I sometimes felt hopeful that employees could make a difference, more often I felt powerless, aware that sustainability was celebrated in words but rarely embedded in the exhausting reality of daily hotel work (Personal reflection).

This personal experience reflects a wider challenge within the hospitality sector: while hotels project an image of comfort and indulgence for guests, they are also workplaces where sustainability must compete with operational pressures and organisational priorities. Although sustainability features prominently in corporate reports and policy agendas, it often remains at the level of rhetoric rather than being embedded in the reality of everyday hotel operations (Chi et al., 2023). The industry's environmental impact is well documented, with hotels identified as significant consumers of energy and water, as well as contributors to waste and greenhouse gas emissions (Prakash et al., 2023, Filimonau et al., 2021). These challenges raise important questions about how sustainability is enacted in practice and, in particular, how employees, who are central to service delivery, navigate the contradictions between efficiency, guest satisfaction, and environmental responsibility.

Sustainability in hotels is complicated by the operational demands of the industry (Chua et al., 2024). Daily practices designed to deliver guest comfort, such as frequent

linen changes, extensive buffets, and intensive climate control, carry significant environmental costs (Khatter et al., 2023; Khatter et al., 2021a). Employees are responsible for carrying out these services, yet they are also expected to adopt sustainable behaviours, a dual responsibility that is often difficult to balance (Kim et al., 2019, Karatepe et al., 2022). At the same time, hotels operate in highly competitive markets where profitability depends on maximising occupancy and controlling labour costs (Pereira-Moliner et al., 2021). Long hours and heavy workloads leave employees with limited scope to engage in sustainability initiatives such as energy monitoring, waste reduction, or guest engagement (Baum et al., 2024, Ioannides et al., 2021). This highlights the persistent gap between sustainability rhetoric at the organisational level and the reality of frontline practice. Despite this, employees remain central to the success of sustainability efforts: as the individuals who deliver services and interact directly with guests, their behaviours not only determine the effectiveness of environmental initiatives but also shape guests' perceptions of authenticity (Arshad et al., 2022, Karatepe et al., 2022). Yet their perspectives are often marginal in both academic research and industry policy, which have traditionally focused on managerial strategies (Knezevic Cvelbar et al., 2024; Baker et al., 2024) or consumer behaviour (Lin et al., 2022, Loureiro et al., 2022, Han, 2021). This gap underscores the need to understand employees not merely as implementers of sustainability policy, but as active agents whose knowledge and experience are vital to embedding sustainability in hotel operations.

Recent studies suggest a growing recognition of employees as active participants in sustainability transitions (Moilanen et al., 2023; Moilanen et al., 2023), with research on tourism workforces highlighting employee engagement (Knezevic Cvelbar et al., 2024; Pham et al., 2019) as a critical driver of sustainability outcomes and showing that employees' environmental knowledge directly influences their ability to adopt sustainable practices (Robinson et al., 2019, Kim et al., 2019, Vovk et al., 2024). Beyond individual engagement and knowledge, organisational studies emphasise the importance of organisational learning mechanisms (OLMs) in embedding sustainability, ensuring that knowledge is shared, institutionalised, and translated into practice (Xia et al., 2022, Alhemimah et al., 2024, Martínez-Martínez et al., 2023).

Together, these insights point to the need for a more comprehensive understanding of how employees contribute to sustainability in hotels, not merely as implementers of managerial strategies, but as knowledge holders, learners, and change agents within their organisations.

This thesis addresses the identified gap by placing employees at the centre of analysis. The overarching research aim is to investigate how employees contribute to the implementation and embedding of sustainability in hotels, and how organisational processes support or constrain this role. By foregrounding the perspectives of employees, the thesis contributes to hospitality sustainability scholarship by shifting the analytical focus from managerial strategies and consumer behaviour to the lived experiences of those who deliver services. It also offers practical insights for the industry, highlighting how employee participation and learning can help move sustainability from rhetoric to reality in the hotel sector.

This chapter outlines the underlying rationale for the thesis. Starting with an exploration of the extant work on sustainability in hospitality, and the role of employees in it, then the overarching research aim of the thesis is explained. Research philosophy, including ontological and epistemological positioning, the rationale for a qualitative design, the type of reasoning adopted, and the ethical considerations that guided the study are then discussed. This philosophical framework then provides the basis for the empirical work that follows and establishes the context within which the three papers are subsequently introduced.

1.2 Sustainability in the hotel industry

Sustainability has shifted from a peripheral concern to a defining expectation for the global hotel industry (Blanco-Moreno et al., 2025). Once associated with luxury, indulgence, and carefree consumption, hotels are now increasingly scrutinised for their environmental footprint, social responsibility, and contribution to sustainable development goals (Gössling et al., 2023, Scott et al., 2024). Continuous operations, high energy and water consumption, and intensive use of resources mean that hotels are highly visible actors in destination economies and societies (Dani et al., 2021,

Prakash et al., 2023, Arenhart et al., 2022). At the same time, global challenges such as climate change, biodiversity loss, and waste generation have intensified the urgency of embedding sustainability across all sectors, with hospitality standing out as a particularly resource-intensive domain (Liburd et al, 2020; Loehr et al, 2021).

Hotels contribute substantially to environmental pressures through high energy use (Dibene-Arriola et al., 2021), greenhouse gas emissions (Arenhart et al., 2022), extensive water consumption (Antonova et al., 2021) and large volumes of waste generation (Diaz-Farina et al., 2023). Energy demands from heating, cooling, and lighting remain major contributors to hotels' carbon footprints (Arenhart et al., 2024), while food waste and single-use plastics further compound environmental costs (Filimonau et al, 2019). Beyond environmental impacts, sustainability is increasingly tied to reputational and financial performance (Flores-Hernández et al., 2020). Investors and consumers demand credible action (Misiuda et al, 2022), while governments embed sustainability requirements into policy and regulation (Aguinis et al., 2023). These converging pressures render sustainability a business-critical issue for hotels, shaping both their legitimacy and long-term resilience (Streimikiene et al., 2021).

By 2024, international tourism had largely recovered to pre-pandemic levels, and arrivals are projected to increase further in 2025 (UNWTO, 2025), underscoring the urgency of embedding sustainability in hotel operations. Sustainability has emerged as a global priority, with the United Nations Sustainable Development Goals (SDGs) providing a framework for balancing economic growth, social inclusion, and environmental protection (UN, 2015). Tourism and hospitality are explicitly linked to several of these goals, particularly Goal 12: Responsible Consumption and Production and Goal 13: Climate Action. The SDGs challenge service industries such as hospitality to move beyond resource-intensive models and contribute to global decarbonisation efforts. International organisations including the UN World Tourism Organization (UN Tourism) and the World Travel & Tourism Council (WTTC) reinforce this message, calling on hotels to reduce carbon intensity and adopt more sustainable operations (WTTC, 2024). These ambitions are reflected in broader

climate commitments such as the Paris Agreement (UNFCCC, 2015), which seeks to limit global warming to well below 2°C, and the Glasgow Declaration on Climate Action in Tourism (UN, 2021), which commits signatories to halve emissions by 2030 and reach net zero before 2050. Recent climate conferences, including COP27 and COP28, have further underlined the need to align tourism and hospitality with global net zero pathways (UNFCCC, 2023). Yet the realisation of these commitments ultimately depends on how industries, organisations, and employees translate them into daily practice.

In the United Kingdom, the framework for legally binding Carbon Budgets was introduced through the Climate Change Act 2008 (ClimateChangeCommittee, 2008), making the UK the first country to establish statutory limits on greenhouse gas emissions. The Act requires the government to set five-yearly Carbon Budgets that define the national trajectory for emission reductions (UKGovernment, 2008). A 2019 amendment strengthened this framework by setting a legally binding target to achieve net zero emissions by 2050 (UKGovernment, 2019). Subsequent budgets, including the Sixth Carbon Budget (2033–2037), approved in 2021 (ClimateChangeCommittee, 2021), and the forthcoming Seventh Carbon Budget (2038–2042), outline progressively deeper reductions consistent with the 2050 goal (ClimateChangeCommittee, 2025).

In response, industry bodies such as UKHospitality have introduced the Hospitality Sector Net Zero Roadmap to 2040, which identifies energy efficiency, waste management, and sustainable supply chains as strategic priorities (UKHospitality, 2022). These initiatives demonstrate alignment with national policy and international frameworks and position the hospitality sector as an important contributor to decarbonisation (UKHospitality, 2022). However, the capacity of hotels to act on these commitments varies widely (WTTC, 2024). Large international chains often have the resources to invest in monitoring systems, staff training, and supplier engagement, whereas independent hotels frequently operate on tight margins, lack dedicated sustainability staff, and prioritise short-term survival over long-term environmental strategies (Mihalic, 2020, NetZeroNow, 2024). This uneven capacity raises questions

about the inclusivity and effectiveness of sustainability agendas within the accommodation sector.

Even where sustainability measures are introduced, questions remain about their depth and authenticity. Eco-certifications such as Green Key, ISO 14001, and Leadership in Energy and Environmental Design (LEED) are promoted as indicators of environmental responsibility, yet their implementation is often inconsistent and, in some cases, superficial (Pertusa-Ortega et al., 2021). Critics highlight the risk of greenwashing, where sustainability initiatives are adopted primarily for marketing advantage rather than substantive environmental change (Lashitew et al, 2021). For instance, towel reuse schemes are frequently showcased as flagship sustainability actions, yet they serve cost-saving objectives as much as ecological ones (Majeed et al, 2023). Increasingly, guests are attuned to these dynamics and judge the credibility of sustainability claims not only by official certifications but also by the visible behaviours of hotel employees (Alyahia et al., 2024, Chua et al., 2024).

Hotels are uniquely positioned to contribute positively to sustainability agendas, as their visibility, stakeholder networks, and daily interactions with guests, suppliers, employees, and local communities make them influential actors in embedding sustainable practices (Ruiz-Fernández et al., 2024). Guests increasingly expect tangible evidence of responsible practice and show willingness to support hotels that demonstrate authentic commitment to sustainability (Galati et al., 2023). However, the credibility of these efforts depends on the consistency between rhetoric and practice, with scholars cautioning against the reputational risks of greenwashing (Alyahia et al., 2024, Lashitew et al, 2021; Majeed et al, 2023). Moreover, as labour-intensive organisations employing millions worldwide, hotels' employment practices and community engagement directly influence tourism's broader legitimacy and contribution to sustainable development (Kim et al., 2019). Hotels differ from many other service organisations due to the intensity of human interaction, the continuous nature of operations, and the high level of resource consumption required to deliver hospitality services (Baum, 2015; Ioannides et al., 2021; Prakash et al., 2023). Unlike sectors where service delivery may be standardised or partially automated, hotels rely

heavily on employees to manage daily operations, interact with guests, and maintain service quality (Baum, 2015). At the same time, hotels operate around the clock and involve multiple interdependent departments such as housekeeping, food and beverage, and maintenance, all of which contribute significantly to energy consumption, water use, and waste generation (Filimonau et al., 2021; Prakash et al., 2023). These operational characteristics create a complex environment in which sustainability initiatives must be balanced alongside service expectations, guest satisfaction, and operational efficiency (Ioannides et al., 2021; Baum et al., 2016). As a result, employees play a particularly central role in translating sustainability commitments into everyday practice, making hotels a distinctive organisational context for examining how sustainability becomes embedded through employee engagement, knowledge, and organisational learning (Kim et al., 2019; Pham et al., 2019).

Sustainability is commonly conceptualised as encompassing three interconnected dimensions: environmental, social, and economic sustainability (Elkington, 1997). While all three pillars are important within the hospitality industry, this thesis focuses specifically on environmental sustainability. This focus reflects the significant environmental footprint of hotel operations, including high levels of energy consumption, water use, and waste generation (Filimonau et al., 2021; Prakash et al., 2023). Moreover, many environmental practices within hotels are directly enacted through employees' daily operational activities, such as waste management, resource conservation, and guest interaction (Kim et al., 2019; Pham et al., 2019). Concentrating on environmental sustainability therefore enables a more focused examination of how employee engagement, sustainability knowledge, and organisational learning mechanisms contribute to embedding sustainable practices within hotel operations.

1.2.1 The green hotel concept

The “green hotel” concept has emerged as one of the hospitality sector’s most visible responses to the sustainability agenda (Chua et al, 2022). These practices were often motivated by cost savings rather than a broader commitment to sustainability, reflecting an instrumental orientation (TM et al., 2021). Over time, however, the

concept has evolved into a more holistic model that integrates sustainability principles across strategy, operations, supply chains, and brand identity (Alreahi et al., 2023, TM et al., 2021). Green hotels are now characterised by the systematic adoption of practices designed to minimise environmental impacts and generate social value (Zhang et al., 2020; Chua and Han, 2022). These range from energy efficiency programmes (e.g., LED lighting, smart Heating, Ventilation, and Air Conditioning systems (HVAC) systems) and water conservation technologies (e.g., low-flow fixtures, greywater recycling) to food waste reduction, sustainable procurement, biodiversity protection, and community engagement (Alreahi et al., 2022). Importantly, the green hotel model is no longer understood as a set of isolated operational adjustments, but rather a strategic orientation that shapes organisational identity and competitive positioning (Alsheref et al., 2024, Elshaer et al., 2024).

As noted earlier, while external certifications and eco-labels were initially discussed in more sceptical terms, (Alreahi et al., 2022; Lin et al., 2022). While these certifications can help standardise practices and benchmark performance, they are not without limitations (Bianco et al., 2023). Scholars caution that eco-labels may encourage a “tick-box” mentality, or be deployed primarily as marketing tools if not supported by genuine organisational commitment (Velaoras et al., 2025). This underscores the importance of moving beyond symbolic compliance to ensure sustainability is embedded across daily operations.

The benefits of green hotel adoption are widely recognised (Bianco et al., 2023). Research identifies gains in operational efficiency, cost savings, enhanced brand reputation, stronger customer loyalty, and access to environmentally conscious market segments (Eid et al., 2021, Trang et al., 2019). Guest surveys also suggest that travellers increasingly prefer sustainable accommodation, thus rewarding hotels perceived as environmentally and socially responsible (Merli et al., 2019). Despite the growing momentum toward sustainable operations, many hotels continue to face substantial barriers to full implementation. The most persistent challenges relate to the high upfront costs of sustainable infrastructure, which are particularly burdensome for small and independent properties (Calisto et al., 2021). Organisational fragmentation

and resistance to change can also impede adoption (Baum et al., 2016, Sharma et al., 2023), while training gaps often leave employees tasked with implementing sustainability initiatives without sufficient resources or knowledge (Bilderback et al., 2024).

Ultimately, the green hotel concept represents a shift from superficial environmental gestures to a more integrated approach in which sustainability forms part of strategic positioning and operational routines. Yet the success of this model depends not only on technical innovations or managerial policies but on the extent to which sustainability becomes a shared responsibility embedded in organisational culture (Andoh et al., 2025). In this respect, employees are indispensable actors whose engagement ensures that sustainability commitments are translated from organisational rhetoric into the reality of hotel operations.

1.2.2 The role of hotel employees

In the academe and the hotel industry, discussions of sustainability have often focused on corporate strategy (Rehman et al., 2023; Teruel Gutiérrez, 2020), leadership and organisational commitment (Patiar et al, 2016; Ahmed et al., 2021), consumer behaviour and green purchasing decisions (Han et al, 2020; Nimri et al., 2020) and technological innovations such as energy and water efficiency systems (Gunduz Songur et al., 2023; Mejia et al, 2019). While these perspectives have significantly advanced understanding of sustainability in hotels, they overlook a critical dimension: the role of employees. Employees are the ones who translate sustainability policies into practice (Baum et al, 2015). Evidence from wider organisational research also shows that employees' environmental attitudes strongly predict their pro-environmental behaviour at work (Wells et al., 2016), reinforcing the importance of viewing employees as active contributors to sustainability rather than passive implementers. Hotels are among the most labour-intensive business in the tourism economy, sustained by a diverse workforce that spans operational and managerial roles (Baum et al., 2016; Ladkin et al., 2023). In hospitality research, employees are considered a heterogeneous group directly involved in services delivery and hotel operations (Nickson, 2013). This workforce includes frontline service employees (e.g.

housekeeping, reception, food and beverage staff); technical and support personnel (e.g. maintenance, security and catering staff); and managerial employees responsible for supervision, coordination and strategic decision-making (Baum, 2015, Fuchs et al., 2021). This scope reflects the complex interdependencies of hotel work, where guest-facing interactions and back-of-house activities collectively shape the overall guest experience (Nickson, 2013). While employees operate across multiple levels of the organisational hierarchy, they share a common feature: their labour directly connects organisational policies with the realities of service delivery (Rahman et al., 2020; Asante, 2024). Unlike sectors where technology automates routine tasks, hotels remain heavily reliant on human interaction, discretion and effort (Buhalis et al., 2019). Therefore, employees cannot be viewed as interchangeable units of labour; rather they are central actors whose actions influence service quality and sustainability outcomes (Pham et al., 2019; Kim et al., 2019).

The rise of the green hotel concept marks a shift from superficial environmental gestures to a more integrated approach in which sustainability is embedded within strategy, operations and organisational identity. However, the success of this model depends on more than managerial vision or technological innovation but also on the extent to which sustainability becomes a shared organisational value enacted through daily work practices (Rubio-Andrés et al, 2024; Khalil et al., 2024). In this respect, employees play a crucial role. Specifically, their behaviours, attitudes and engagement determine whether sustainability commitments move beyond organisational rhetoric into operational reality (Oriade et al., 2021).

The following sections elaborate on the ways in which employees contribute to the realisation of sustainability in hotels. Firstly, it examines how employees enact and communicate sustainability through their daily work practices, translating organisational objectives into meaningful actions and guest experiences at the operational level. Secondly, it explores how employees mediate sustainability within the organisation, bridging managerial strategies and frontline realities by adapting, interpreting and transferring sustainability knowledge across the hotel hierarchy. Lastly, it considers how employees develop and share learning that supports

continuous improvement, highlighting their role as co-creators of the organisational knowledge and adaptive capacity required for long-term sustainability.

1.2.2.1 Enacting and communicating sustainability in daily practice

Employees are key to translating sustainability strategies into daily routines that shape the socio-environmental performance of hotels (Pham et al., 2020). While corporate policies and technologies establish the structural framework for sustainable operations, it is employees who bring these strategies to life through their daily decisions, interactions and behaviours. Their actions determine whether sustainability remains an abstract goal or becomes an integrated part of hotel culture and practice.

At the operational level, employees enact sustainability through tasks such as waste management, energy conservation, sourcing and guest engagement (Luu et al., 2020; Fu et al., 2022, Khalil et al., 2024). Research shows that Green Human Resource Management (GHRM) initiatives (e.g. targeted training, performance incentives and participatory programmes) can strengthen the environmental commitment of employees and shape their pro-sustainability behaviours (Tandon et al., 2023). However, the success of these initiatives depends on how employees interpret and integrate sustainability within the context of their work systems and priorities. Rather than straightforward compliance, operationalising sustainability involves balancing competing pressures, such as delivering high-quality service, maintaining efficiency and meeting environmental standards (Van Riel et al., 2019). To manage these tensions, employees frequently rely on professional discretion and informal learning, adapting sustainability procedures to the realities of daily operations (Smith et al., 2012). Through this process, sustainability becomes a lived process, shaped continually by the judgements and experiences of employees.

Beyond internal operations, employees also act as the primary communicators of sustainability values to guests (Baum et al., 2019). Their words, actions and service encounters contribute to how guests perceive sustainability, either as an authentic organisational commitment or a superficial marketing claim (Cho et al., 2021; Park et al., 2014; Acampora et al., 2022). When employees consistently model genuine pro-

environmental behaviours, guests are more likely to trust the sustainability message of the hotel and engage in responsible practices themselves (Al-Sabi et al., 2024; Zhao et al., 2025).

Ultimately, employees' effectiveness in enacting and communicating sustainability depends on their understanding of, and belief in, the organisation's values. When staff are well-informed, empowered and supported, they become credible ambassadors who embody sustainability in practice (Pham et al., 2020). Conversely, gaps between managerial rhetoric and operational reality can undermine authenticity and lead to scepticism. Recognising employees as both implementers and communicators underscores their dual influence in translating organisational commitments into meaningful guest experiences and credible environmental outcomes.

1.2.2.2 Challenges in mediating sustainability across managerial and operational levels

Translating corporate sustainability goals into actionable practices within hotel operations is complex and often inconsistent. While senior management typically engages with sustainability at the level of compliance, reporting and strategic planning, operational employees encounter sustainability through routine, guest-facing tasks, shaping their understanding through direct experience rather than formal guidance (Chan et al., 2017). This disconnect creates uneven sustainability knowledge across organisational levels, often resulting in misinterpretation, inconsistent implementation and communication breakdowns (Baum et al, 2019).

These tensions highlight a critical challenge in hotel sustainability: the absence of systematic translation mechanisms that support shared understanding, consistent communication and coordinated action across hierarchical and functional boundaries. To address these structural and knowledge-related gaps, hotels must adopt people-centred mechanisms that strengthen sustainability understanding, capability and implementation across organisational levels.

In this study, employees are regarded not as passive recipients of sustainability policies but as co-creators of sustainability in practice. Their experiences, insights and

collaborative practices help develop the adaptive capacity required for ongoing sustainability improvement. This conceptualisation forms the groundwork for analysing how hotels sustain and embed socio-environmental practices over time.

Despite this centrality, existing research provides only a partial understanding of how employees engage with sustainability in practice and through what mechanisms their knowledge and actions translate to lasting organisational change. Much of the current literature continues to frame sustainability as a managerial or technical issue, overlooking the everyday learning processes through which sustainability becomes embedded in hotel operations. Addressing this gap in sustainable hospitality literature is a central aim of this thesis. The following section therefore outlines the specific research gaps in sustainable hospitality scholarship and establishes the contribution of this thesis.

1.2.3 Employee Sustainability Behaviours in Hotel Operations

Understanding how sustainability is enacted within organisations requires attention to the behaviours of employees who translate sustainability commitments into everyday practice. Organisational research increasingly emphasises employee sustainability behaviour as a critical driver of environmental performance (Ones and Dilchert, 2013). Ones and Dilchert conceptualise employee environmental sustainability behaviour as a broad set of workplace actions that contribute to environmental protection or reduce the environmental impact of organisational activities. These behaviours may range from formally prescribed actions embedded in job roles to discretionary behaviours that employees undertake voluntarily to support environmental goals.

Within hotel operations, employee sustainability behaviours may take several forms. At the operational level, employees may engage in behaviours such as reducing water and energy consumption, managing waste, implementing recycling practices, or encouraging guests to participate in sustainability initiatives (Kim et al., 2019; Pham et al., 2019). Supervisors and department managers may support sustainability by reinforcing environmental practices, coordinating training, and facilitating knowledge sharing across teams. At a broader organisational level, leaders may shape sustainability behaviour through policies, communication, and the integration of

environmental objectives into organisational strategy (Darvishmotevali et al., 2022; Martínez-Martínez et al., 2019). The Ones and Dilchert framework is therefore useful for understanding how sustainability behaviours can occur across different organisational levels and roles, highlighting the importance of both formal responsibilities and discretionary employee actions in embedding sustainability within hotel operations.

1.3 Research Gap and Rationale

Sustainability is now central to hospitality scholarship, reflecting heightened recognition of hotels' environmental, social and economic responsibilities (Kim et al., 2019; Khalil et al., 2024; Adams et al., 2022). Over two decades, research has examined environmental management systems (López-Gamero et al., 2023; Sun et al., 2022), corporate social responsibility (Moyeen et al, 2024, Pereira-Moliner et al., 2021), stakeholder engagement (Vrontis et al., 2022; Khatter et al., 2021) and green marketing (Chandran et al, 2021; Prakash et al., 2023). This body of work establishes sustainability as strategically and ethically consequential for competitiveness, reputation and long-term viability in the hotel industry (Okumus et al., 2019, Rehman et al., 2023).

Yet the prevailing lens remains managerial and strategic, centred on how sustainability is designed, implemented and communicated at the organisational level. Studies emphasise eco-certifications (Velaoras et al., 2025; Chan et al, 2023; Wells et al., 2018), leadership commitment (Patiar et al, 2016; Asante et al, 2024) and consumer behaviour (Nimri et al., 2020; Mohd et al, 2015). They often assume that once systems and policies are established, sustainability will naturally permeate daily operations, neglecting the human and organisational dynamics through which sustainability is enacted. Evidence increasingly documents a disjunction between sustainability rhetoric and operational reality (Baum , 2018; Robertson et al, 2017; Pereira-Moliner et al., 2021). Hotels may publicise commitments or secure certifications, but behaviours on the ground remain inconsistent. This gap exposes a critical oversight, that is, sustainability in hotels depends not only on managerial decisions or

technological interventions but also on employees' everyday actions, judgments and interactions.

Hotels are highly labour-intensive service organisations, and employees' work directly shapes environmental and social outcomes (Ioannides et al., 2021). Their decisions about waste management, resource use and guest interaction collectively determine whether sustainability initiatives embed or remain symbolic (Kim et al., 2019; Filimonau et al., 2023). Nonetheless, employees remain under-represented and under-theorised. They are depicted as passive implementers rather than active agents who interpret, adapt and innovate sustainability in practice (Raza et al, 2022).

Although the hospitality literature highlights the strategic importance of sustainability, far less is known about how sustainability is enacted in the everyday reality of hotel operations. Research repeatedly shows that formal commitments and organisational policies do not automatically translate into routine practice (Robertson et al, 2017; Baum, 2018). Studies also note that limited attention has been paid to how employees influence this process and how sustainability evolves through day-to-day work interactions (Filimonau et al., 2021; Ioannides et al., 2021). Addressing this gap requires shifting the analytical focus from top-down structures toward the organisational experiences and daily actions through which sustainability is interpreted, negotiated, and realised in practice (Knezevic Cvelbar et al., 2024)

This thesis responds to that gap by reorienting attention towards the people who make sustainability work in practice. It treats employees not as recipients of directives but as co-creators who understand, enact, and embed sustainability within hotel organisations, shaping whether sustainability initiatives become meaningful and enduring.

The aim of this thesis is **to explore how sustainability becomes embedded as an organisational process in hotels by examining the employee-mediated mechanisms that translate stated commitments into consistent everyday practice.**

This positioning frames the research as analytical and generative. The study examines how sustainability is enacted in hotel operations and conceptualises how it can be more effectively embedded through organisational structures that support learning, reflection, and collaboration. In doing so, the thesis advances theoretical understanding of sustainability as a lived, evolving process rather than a static policy goal. It also offers practical guidance for moving beyond symbolic compliance towards genuine, employee-driven sustainability.

1.4 Research Philosophy

Understanding how sustainability becomes embedded within hotel operations requires a research approach that views organisations as socially constructed environments shaped through the actions and interactions of those within them (Adams et al., 2022). Sustainability in hotels is not only articulated through policy, but enacted and experienced in everyday routines, decisions and relationships. This study therefore adopts a philosophical and methodological stance that recognises meaning, knowledge and behaviour as situated, evolving and influenced by organisational context. Each chapter contains its own unique methodology to further elaborate the research process, although here I summarise the overarching premise of the research approach.

1.4.1 Philosophical Positioning

This research is grounded in a relativist ontology, acknowledging that sustainability in hotels is experienced differently across roles, departments and organisational levels (Crotty, 1998; Lincoln and Guba, 1985). For senior managers, sustainability may relate to brand value or strategic alignment; for frontline employees, it may be tied to resource use, waste, or guest interaction. These understandings coexist and influence practice in complementary and sometimes contrasting ways.

Aligned with this position, the study adopts an interpretivist epistemology in which knowledge is understood as emerging through interaction, reflection and practice (Bryman, 2016; Schwandt, 1994). Rather than treating sustainability as a fixed construct, this approach recognises that employees come to know and enact

sustainability through experience, informal learning and shared workplace knowledge (Pham et al., 2019). The aim therefore is to explore how employees come to understand sustainability, how they participate in it, and how organisational structures and routines shape this engagement. Rather than generalising, the study illuminates how sustainability becomes meaningful and actionable within specific hotel contexts.

This philosophical stance reflects my own assumptions about organisations and knowledge formation (Gioia et al, 1990). With over twenty years of industry experience in hospitality and tourism, I enter this research as both an informed practitioner and a critical academic. My professional background provides sensitivity to operational pressures, service dynamics and the often-unseen labour that shapes sustainability practice in hotels. At the same time, it requires ongoing reflexivity to recognise how prior experience may shape interpretation (Rubin et al, 2012). I approach the inquiry as a reflexive participant-researcher, consciously attending to how my assumptions influence meaning-making while ensuring that participants' perspectives remain central (Finlay, 2002; Alvesson et al, 2017). In doing so, reflexivity strengthens rather than compromises rigour, supporting transparency in interpretation and coherence between philosophical assumptions and research behaviour.

Building on this philosophical foundation, the study adopts a qualitative approach to explore how sustainability is interpreted and enacted within hotel settings. Qualitative inquiry enables close attention to the meanings employees attach to sustainability, how these meanings are shaped through everyday interactions, and how organisational conditions influence the extent to which employees can act on sustainability intentions (Lune et al, 2017; Denzin, 2018). Rather than focusing on frequency or measurement, this approach supports understanding of how sustainability is lived, negotiated and practised across different roles and organisational contexts. Semi-structured interviews align with this interpretive orientation by allowing participants to articulate their perspectives in their own words and reflect on their experiences, challenges and contributions to sustainability. This conversational style provides space for employees to surface what matters to them, including informal and often invisible aspects of

sustainable practice (Rubin et al, 2012; Patton, 2014). Engaging employees across different functions supports exploration of sustainability as a shared organisational endeavour shaped through collaboration, knowledge-sharing and workplace routines rather than a solely managerial directive. To further illuminate how sustainability becomes embedded in organisational life, the research later incorporated a case-study lens. The case study allows attention to sustainability as an organisational process, shaped by routines, structures and relationships within a real hotel context (Yin, 2018; Stake, 1995). The analysis followed an abductive approach, combining inductive and theory-informed interpretation. The process began with inductive coding of interview data, allowing themes to emerge from participants' accounts without the imposition of predefined categories. This facilitated a grounded understanding of how employees experience and enact sustainability within hotel operations.

As the analysis progressed, the process became increasingly iterative and abductive, involving continuous movement between empirical data and relevant theoretical frameworks. Emerging themes were refined and interpreted in relation to existing literature on employee engagement, sustainability knowledge, and organisational learning mechanisms. This iterative engagement ensured that the analysis remained grounded in participants' experiences while also contributing to theoretical development (David et al., 2010).

This abductive approach is consistent with the research aim of exploring how sustainability becomes embedded as an organisational process shaped through employee-mediated practices. It is particularly appropriate for capturing the complexity of sustainability as a socially embedded organisational phenomenon, where meanings and practices emerge through the interaction between individual experience and organisational context.

Ethics were embedded throughout this research, reflecting the relational nature of organisational inquiry and the need to protect participants working within live organisational settings. Ethical approval was obtained from the University of Strathclyde, and all participants received clear information about the study, their rights, and the voluntary nature of participation. Informed consent was obtained prior to data

collection. Given the workplace context, particular care was taken to ensure confidentiality and anonymity. Pseudonyms were used, and organisations are described only in general terms to prevent identification. Discussions sometimes touched on operational challenges, interpersonal dynamics or organisational constraints; interviews were therefore conducted with sensitivity, acknowledging participants' emotions and professional situations (Tracy et al, 2010). Data were stored securely in accordance with university policy.

The study was initiated with the broad aim of: exploring how sustainability becomes embedded as an organisational process in hotels by examining the employee-mediated mechanisms that translate stated commitments into consistent everyday practice. As empirical engagement progressed, the study evolved in response to the complexity of the context and the richness of participant narratives. Insights did not emerge in a linear sequence; instead, they developed through ongoing interaction with the field, reflection on meanings shared by participants, and continued refinement of analytic focus. In practice, this meant moving repeatedly between participant accounts, developing interpretations, and returning to theory and context to deepen understanding (Charmaz et al., 2018)

Over time, it became clear that employees' sustainability actions could not be considered in isolation. Workplace conditions, organisational expectations, tacit knowledge, and informal learning shaped how sustainability was interpreted and practised across hotel departments. This prompted a shift from examining sustainability as an individual behaviour to examining it as a socially embedded and organisationally produced phenomenon. Through iterative and abductive engagement with the data, the analysis began to foreground the interplay between employee understanding, organisational routines and the informal mechanisms through which sustainability learning circulates and becomes normalised (David et al, 2010).

The insights presented in this thesis therefore reflect a dynamic analytic process grounded in participants' lived experiences and enriched through ongoing theoretical dialogue. Rather than claiming universal truths, the research offers detailed, contextually grounded accounts that illuminate how sustainability becomes

meaningful and actionable within hotel environments. The methods of data collection and analysis are described in more depth within each paper and demonstrate how the interview data answers each paper's individual research objectives.

1.5 Paper summaries

Following the overarching research aim presented in section 2.1, each empirical paper adopts its own focused research objective that directs its contribution to the thesis. Given the breadth and complexity of the overall aim, it was necessary to examine this phenomenon through multiple, complementary lines of inquiry. The thesis is therefore structured across three papers, each of which investigates a distinct aspect of employee involvement in sustainability. Together, these paper-level objectives provide depth to the analysis while ensuring coherence and alignment across the three studies. Below is a summary of each paper.

1.5.1 Facilitating employee engagement in hotel sustainability initiatives

The first empirical paper explores how hotel employees engage with sustainability initiatives and what organisational conditions enable or constrain that engagement. Positioned as the opening stage of the thesis's conceptual trajectory, it addresses the persistent gap between sustainability rhetoric and operational reality by focusing on the motivational and behavioural dimensions of sustainability enactment in the labour-intensive context of hotels. Building on the interpretivist philosophical foundation outlined earlier, the paper views employees not as passive implementers of top-down strategies but as active agents whose engagement determines whether sustainability becomes authentically embedded in daily practices or remains a symbolic exercise.

Employee engagement, defined as the cognitive, emotional, and physical involvement that individuals bring to their roles (Kahn, 1990; Saks, 2006; Saks, 2019), provides the conceptual foundation for the study. Within hospitality, engagement has long been linked to service quality and organisational performance (Karatepe et al., 2021), and more recently to environmental and social responsibility (Darvishmotevali et al, 2022).

In the hotel context, where work is both people-intensive and resource-dependent, employees' engagement determines how sustainability commitments are interpreted, prioritised, and translated into concrete action. Engaged employees align their personal values with organisational goals, actively seeking to improve environmental performance, conserve resources, and communicate sustainability practices credibly to guests (Chua et al, 2022). By contrast, low engagement manifests as apathy or resistance, reinforcing the perception of sustainability as managerial rhetoric rather than authentic practice (Ababneh et al, 2021).

Research consistently links employee engagement with pro-environmental behaviour and support for sustainability initiatives (Kim et al., 2019; Paillé et al., 2014; Wells et al., 2016). However, much of this work conceptualises engagement as an individual psychological state, giving limited attention to the organisational conditions, such as workload, hierarchy and leadership, that shape employees' ability to participate in sustainability (Baum, 2018). In response, **Chapter II (Paper 1)** is guided by the following research objective:

To investigate the importance of employee engagement in hotel sustainability initiatives and to explore the factors that facilitate improving employee engagement in these initiatives.

In doing so, the paper also examines how increasing engagement can motivate and empower employees to implement and promote sustainable practices.

The study adopts a qualitative, interpretivist design, drawing on semi-structured interviews with thirty-five hotel employees across departments and roles in UK hotels that have made public sustainability commitments. This approach captures the lived experiences of employees and the situated meanings they attach to sustainability within their work. Inductive thematic analysis identifies recurring patterns in how employees describe their emotional connection, behavioural participation, and cognitive alignment with sustainability, alongside the organisational factors that shape these dynamics. Engagement is revealed to be multifaceted and fluid, emerging through interactions among staff, individual motivation, leadership behaviour,

organisational culture, and operational structure. Findings show that engagement operates as both a driver and an indicator of genuine sustainability in hotels. Employees who felt emotionally connected to their organisation's environmental goals demonstrated greater initiative in waste reduction, energy conservation, and guest interaction, confirming the practical significance of engagement in daily operations (Abdou et al., 2020; Tandon et al., 2023).

The study further demonstrates that leadership and organisational culture are decisive in cultivating engagement. Managers who model sustainable behaviour, provide clear communication, and recognise staff contributions foster higher engagement, a finding consistent with evidence that leadership style and organisational justice strongly affect staff motivation in hospitality (Darvishmotevali et al, 2022; Mittal et al, 2016). Hotels that integrate sustainability into their organisational identity rather than treating it as an operational add-on demonstrate broader, team-level engagement and greater diffusion of practices across departments (Martínez-Martínez et al., 2019). Conversely, when employees perceive a mismatch between corporate rhetoric and daily reality, such as lack of resources, limited autonomy, or unrealistic workloads, engagement erodes rapidly (Baum, 2018).

Importantly, the study reveals a reciprocal relationship between engagement and knowledge. Employees who are engaged are more likely to seek and share sustainability knowledge, while structured opportunities for learning, through training, peer-to-peer communication, and feedback, further strengthen engagement and competence (Pham et al., 2019). This interplay underscores that engagement is not a fixed state, but a process continually reinforced through communication, collaboration, and organisational learning. However, sustaining engagement is complicated by the structural realities of hotel work. High workloads, long hours, and staff turnover are common features of the sector (Dwesini, 2019; Legrand et al., 2022), limiting the time and continuity needed to develop both engagement and expertise. Participants frequently noted that sustainability training and enthusiasm were lost when experienced staff left, weakening the collective capability to maintain or expand initiatives. These findings align with prior research linking engagement to retention

and demonstrating that stability supports the accumulation of tacit sustainability knowledge (Graham et al., 2023).

The paper contributes to sustainable hospitality research by reframing employee engagement as the mechanism through which sustainability is operationalised and legitimised in hotels. It extends existing literature by demonstrating that engagement is socially embedded rather than individually determined and that its success depends on leadership integrity, supportive culture, and continuous learning structures (Martínez-Martínez et al., 2019). Practically, the study emphasises the need for participatory leadership and realistic work design, ensuring that sustainability is not perceived as an additional burden but as an integral and achievable part of hotel operations.

As the first step in this thesis, the paper establishes engagement as the motivational foundation for sustainability in hotels. However, it also highlights that motivation alone is insufficient without the knowledge required to act effectively and adaptively in complex operational environments. The next paper, therefore, examines the second dimension of the thesis regarding sustainability knowledge, exploring how different forms of knowledge are developed, shared, and applied by employees and how these processes shape their ability to sustain and deepen engagement over time.

1.5.2 Engendering Sustainability Knowledge in Organisational Settings: An In-depth Exploration of Hotel Operations

Building on the first paper, which examined employee engagement as the foundation for embedding sustainability in hotel operations, the second paper focuses on sustainability knowledge, specifically how employees acquire, interpret, and apply what they know about sustainability in their daily work. While engagement provides the motivational foundation for sustainable action, knowledge determines how sustainability is understood, prioritised, and enacted within hotel environments. This paper investigates the forms and sources of sustainability knowledge and examines how these influence employees' ability to contribute to sustainability implementation across a range of hotel contexts.

Existing literature recognises that knowledge plays a vital role in achieving sustainability goals within hospitality and tourism organisations (Pham et al., 2019). However, most studies approach knowledge as a technical or cognitive construct rather than a socially situated and evolving process (Chan et al., 2017). They tend to emphasise formal training, environmental management systems, and top-down awareness programmes, overlooking how employees develop and exchange sustainability knowledge informally through social interaction and daily practice. The paper elevates the framework from Kaiser and Fuhrer (2003), which conceptualises sustainability knowledge across four dimensions (declarative, procedural effectiveness, and social knowledge) at the individual level, to the organisational level, where sustainability actions are enacted under operational pressures, shifting staffing patterns, and layered hierarchies. Prior tourism knowledge studies likewise emphasise that knowledge flows depend on organisational systems, networks and timing (Cooper, 2006; Xiao et al., 2007). The existing research emphasises that sustainability knowledge rarely flows evenly across organisational levels, reinforcing the need to examine how such knowledge is developed, shared, and constrained within hotel settings. By incorporating sustainability knowledge into organisational studies, it becomes possible to better understand the mechanisms that shape employees' engagement with sustainability practices and the barriers that limit the implementation of sustainability strategies (Benn et al., 2014). While the Kaiser and Fuhrer (2003) framework has informed prior environmental behaviour research, few organisational studies have applied it to explore how employees actually use, interpret, and integrate these different forms of knowledge within workplace practice (Filimonau et al., 2021, Alipour et al., 2019; He et al., 2022). This gap underscores the need to examine not just what employees know, but how knowledge is distributed, communicated, and enacted in the organisational environment, and how uneven knowledge flows shape sustainability outcomes. In response, **Chapter III (Paper 2)** is guided by the following research objective:

To explore how the dissemination and application of sustainability knowledge within hotel organisations influence sustainability practices, with particular emphasis on

understanding knowledge as a central mechanism in advancing organisational sustainability.

The study applies a qualitative, interpretivist methodology, using semi-structured interviews with employees from multiple hotels and organisational levels within the UK hospitality sector. This broader approach allows comparison across different operational environments and roles. Data were analysed thematically following six-step process (Gioia et al, 1990). The analysis was inductive, progressing from open coding to the identification of patterns and interpretive themes. Codes were then mapped onto the four knowledge dimensions proposed by Kaiser and Fuhrer (2003), with additional emergent insights leading to the identification of a fifth knowledge type. The analytical process was iterative, involving repeated readings, memo-writing, and clustering of related ideas to ensure rigour and depth in theme development. Findings reveal that sustainability knowledge is multifaceted, socially embedded, and unevenly distributed across hotel roles.

1. Declarative knowledge, (*knowing what*) was more developed among managers, who linked sustainability to strategic goals, certifications, and brand positioning. In contrast, frontline employees tended to hold more fragmented and task-specific understanding shaped by routine exposure rather than formal instruction. While most employees were aware of sustainability as an organisational priority, many lacked deeper clarity on its meaning, scope, and relevance to their role, illustrating a clear divergence in knowledge depth between senior and operational staff.
2. Procedural knowledge, (*knowing how*) was primarily developed informally through experience, observation, and peer learning. Frontline employees frequently reported learning sustainable practices through trial-and-error, informal demonstrations, and daily practice. Managers, however, often expressed confidence in sustainability in principle but sometimes lacked operational familiarity with how practices were enacted on the ground. This resulted in employees having strong practical knowledge but limited structured

guidance, while leaders understood sustainability conceptually yet were less connected to the practical realities of delivering it.

3. Effectiveness knowledge (*knowing why*) revealed a marked divide between leadership and operational staff. Leaders consistently articulated clear environmental and financial justifications for sustainability practices, demonstrating strong effectiveness knowledge. However, this understanding was comparatively weak among frontline employees, many of whom performed sustainability-related tasks without understanding their broader organisational or environmental rationale. When operational staff did demonstrate deeper understanding, this was most often attributed to personal experience or informal peer conversations rather than formal organisational communication, highlighting gaps in structured knowledge transfer.
4. Social knowledge, (*knowing the shared values, norms, expectations, and who to engage with*) operated largely informally. Employees often relied on trusted colleagues or supportive supervisors for sustainability guidance. In hotels where managers modelled open dialogue and involvement, shared understanding and participation were stronger. Where social support was limited or hierarchical distance was high, employees felt disconnected from sustainability goals, reinforcing the importance of relational learning and cross-level interaction.

An additional dimension, *temporal knowledge*, emerged as critical. This involved knowing *when to share* sustainability knowledge and *when to enact* it. Knowing when to communicate sustainability acted like a lubricant, smoothing knowledge dissemination and increasing receptivity by aligning learning with operational rhythms (e.g., quieter periods, procedural changes). Knowing when to enact knowledge functioned like a glue, supporting the integration of the disparate types of knowledge held by individuals in different roles and different hierarchical levels, to support the integration of sustainability into daily routines by aligning actions with workload demands and guest flows. Together, these temporal sensibilities enabled employees to balance sustainability goals with service pressures and resource constraints.

By extending the Kaiser and Fuhrer (2003) model to include temporal knowledge, this study advances theoretical understanding of how sustainability knowledge functions in organisational (and especially hospitality) contexts. It positions employees as active interpreters and co-creators of sustainability knowledge rather than passive recipients of managerial information. The findings emphasise the importance of supporting informal learning processes and creating organisational conditions that value practical, context-sensitive forms of knowledge.

In conclusion, Paper 2 contributes to the overall thesis by explaining how sustainability knowledge underpins and interacts with employee engagement. It bridges the gap between motivation and action, showing that sustainable performance in hotels depends on diverse and evolving knowledge types that are social, experiential, and temporal. These insights provide the conceptual and empirical foundation for Paper 3, which explores how organisational learning mechanisms capture, formalise, and institutionalise these knowledge forms to sustain organisational change.

1.5.3 Organisational learning mechanisms and the fragmented learning ecology of hotel sustainability

The findings from Paper 2 show that sustainability knowledge in hotels is often unevenly distributed, informally communicated, and weakly embedded, raising questions about how such knowledge is reinforced or lost across organisational levels. Building upon this, the third paper advances the discussion by exploring how organisations capture, structure, and institutionalise this knowledge through Organisational Learning Mechanisms. While the second paper conceptualised sustainability knowledge as a socially situated and evolving process, Paper 3 shifts focus to the organisational systems that enable or constrain this learning within hotels. It investigates how individual understanding and practice-based knowledge are translated into collective routines and enduring organisational memory.

This study argues that the persistence of superficial sustainability practices is not due to employee indifference but to the fragmented nature of organisational learning within hotel operations. Building on Argyris' (1996) theory of organisational learning and

Lipshitz et al. (2006) OLM framework, the paper introduces the concept of a *Fragmented Learning Ecology* to describe the uneven and discontinuous distribution of sustainability knowledge across departments, roles, and employment types. Existing research suggests that without effective organisational learning mechanisms, sustainability efforts tend to be patchy and lack continuity (Argyris and Schön, 1997; Lipshitz et al., 2002; Xia, 2022). In response, Chapter IV (Paper 3) is guided by the following research objective:

To explore how sustainability-related organisational learning mechanisms are enacted, interpreted, and experienced within hotel operations, and to examine how these processes contribute to a fragmented learning ecology that shapes the embedding of sustainability practices over time.

The study adopts a qualitative, embedded single-case design focused on an independent Scottish hotel recognised for its commitment to sustainability. This context provides an opportunity to observe both formal and informal OLMs as they unfold in daily operations. Data were collected through twenty-four semi-structured interviews, researcher field notes, and organisational artefacts, including signage, staff briefings, and supplier communications. Participants represented a cross-section of the hotel workforce: front-of-house (FOH) and back-of-house (BOH), permanent, part-time, and seasonal employees, enabling examination of how sustainability knowledge and learning opportunities varied by role and employment status. The analysis followed (Gioia et al, 1990) thematic framework, complemented by Yin (2018) pattern-matching approach to strengthen analytic validity.

Findings reveal that organisational learning in hotels does not function as a cohesive system but as a fragmented ecology of disconnected mechanisms. Formal mechanisms such as campaigns and top-down communications were accessible mainly to managers and FOH staff, while BOH and seasonal employees received only minimal induction and task-based instructions. Informal learning through observation, imitation, and peer feedback, was powerful but uneven, depending on the presence of local champions such as department heads or supervisors. External learning, primarily from suppliers,

introduced valuable sustainability insights but circulated selectively, enriching kitchen practices while bypassing other departments. Collectively, these disparities resulted in an ecology where sustainability knowledge was fragile, localised, and easily lost through staff turnover or operational pressures.

The study advances theory in several key ways. First, it extends Organisational Learning Mechanism theory to fragmented, high-turnover, service-intensive settings, demonstrating that mechanisms do not automatically function as integrated systems but are mediated by structure, hierarchy, and employment precarity. Second, by conceptualising the Fragmented Learning Ecology, the paper offers a new lens for understanding how sustainability learning is distributed unequally across organisations, bridging micro-level employee knowledge and macro-level organisational systems. Third, it strengthens the link between learning and unlearning, showing that sustainable transformation requires not only knowledge acquisition but also the deliberate abandonment of entrenched routines that conflict with sustainability goals. Practically, the paper provides a framework for reconnecting fragmented learning mechanisms. It proposes that hotels move beyond symbolic campaigns by embedding short pre-shift sustainability briefings, visible performance dashboards across FOH and BOH, and structured inductions for all staff, including seasonal employees. Leadership should serve as the central reinforcing mechanism, ensuring that learning flows horizontally across departments and vertically through organisational hierarchies. External actors, such as suppliers and guests, should be integrated into learning loops to translate external sustainability knowledge into internal operational routines. Together, these measures transform sustainability learning from episodic initiatives into continuous, inclusive organisational processes.

1.6 Chapter summary

This chapter introduced the background, motivation and academic positioning of the thesis. It began by outlining the wider challenges surrounding sustainability in the hotel sector and highlighting the gap between organisational commitments and the realities of daily operational practice. In response to this gap, the chapter articulated

the overarching research aim and established the need to explore sustainability as an organisational process shaped through employees' everyday experiences and actions.


The chapter then presented the philosophical foundations of the research, outlining the interpretivist stance, relativist ontology and qualitative methods that underpin the empirical work. Finally, the chapter set out the specific research objectives guiding each of the three papers, demonstrating how they collectively address the broader aim of the thesis while offering distinct, complementary contributions. Together, these three research papers provide a coherent structure for examining how sustainability becomes embedded within hotel organisations through employee action, knowledge, and learning. Each paper offers a distinct yet interconnected contribution to the overall thesis aim, enabling a deeper and more comprehensive understanding of sustainability as an organisational process. To clarify how each paper contributes to the overall thesis aim and to document their publication trajectory, the Table 1 provides an overview of the three papers, their thematic focus, and their current publication status.

Table 1: Papers

Paper	Title	Focus	Publication Status	Target Journal
1	Facilitating employee engagement in hotel sustainability initiatives	Examines employee engagement as the motivational basis for embedding sustainability in hotel operations.	Submitted	Sustainable Tourism
2	Engendering Sustainability Knowledge in Organisational Settings: An In-depth Exploration of Hotel Operations	Investigates how sustainability knowledge is developed, disseminated, and mobilised by employees.	Submitted	Tourism Management
3	Organisational Learning Mechanisms and the Fragmented Learning Ecology of Hotel Sustainability	Explores how organisational learning processes support or constrain sustainability embedding.	In preparation	Draft manuscript

**Chapter II- Facilitating Employee
Engagement in Hotel
Sustainability Initiatives**

Statement of Authorship

This declaration concerns the article entitled:			
Facilitating Employee Engagement in Hotel Sustainability Initiatives			
Publication status (tick one)			
Draft manuscript	<input type="checkbox"/>	Submitted	<input type="checkbox"/>
		In review	<input checked="" type="checkbox"/>
		Accepted	<input type="checkbox"/>
		Published	<input type="checkbox"/>
Publication details (citation where relevant)	Sustainable Tourism		
Copyright status (tick the appropriate statement)			
	The material has been published with a CC-BY license	<input type="checkbox"/>	The publisher has granted permission to replicate the material included here
			<input type="checkbox"/>
Candidate's contribution to the paper (provide details, and also indicate as a percentage)	<p>The candidate contributed to / considerably contributed to / predominantly executed the...</p> <p>Designed and conducted all data collection and analysis (100%), and presentation in journal format: independently wrote full first draft and responded to supervisor commentary (90%).</p>		
Statement from Candidate	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature.		
Signed (typed signature)		Date	12/12/2025

Abstract

This study investigates the importance of employee engagement in hotel sustainability initiatives and explores strategies to foster employee participation in developing sustainable hotels. While existing research highlights the importance of employees in improving sustainability in the hotel industry, it does not examine how to translate policy into active engagement with sustainability practices. This study identifies key facilitators for enhancing emotional, cognitive, and physical engagement through qualitative analysis, thereby influencing employees' involvement in sustainability efforts. Findings reveal that emotional engagement is crucial in fostering employee commitment, while cognitive and physical engagement contribute to the successful implementation of sustainable practices. The study also highlights the challenges of high employee turnover and identifies engagement strategies that can improve retention and knowledge continuity.

Keywords: Employee Engagement, Hotels, Sustainability, Sustainability Management. Hotel Employee, Facilitating Employee Engagement

2.1 Introduction

Extant sustainability research typically focuses on hotel customer behaviour (Nimri et al., 2020; Kamboj et al., 2022; TM et al., 2021), with less attention given to the critical role of employees in fostering sustainable practices (Alreahi et al., 2022, Miah et al., 2024). However, hotels are inherently people-oriented (Baum et al, 2019), and sustainability initiatives require employee involvement to foster a culture of sustainability that benefits the environment and improves employee morale and retention rates (Darvishmotevali et al, 2022; Tandon et al., 2023). We propose employee engagement theory as an ideal theoretical lens for understanding the employees' role in enhancing hotel sustainability initiatives, with employee engagement necessary for the successful implementation of change (Graham et al., 2023, Huertas-Valdivia et al., 2018), for improving operational efficiency (Khalil et al., 2024), and for cultivating a culture of sustainability that resonates with both staff and guests (Alipour et al., 2019).

Employee engagement is “the harnessing of organisation members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances” (Kahn, 1990, p. 694). Many studies explore the antecedents and consequences of employee engagement (Saks, 2006), with recent hospitality literature highlighting its significant impact on outcomes, including service delivery, employee loyalty, proactive behaviours, job performance, job satisfaction, guest satisfaction, and financial performance (Karatepe et al., 2021; Jyoti et al, 2022; Wang et al., 2020). Yet, the role of employee engagement in undertaking sustainability initiatives is under-researched (Glavas, 2012; Graham et al., 2023).

To address this gap, this paper explores the importance of employee engagement in hotel sustainability initiatives, identifying the factors that facilitate employee engagement with sustainability initiatives. Utilising qualitative interviews with thirty UK-based employees from hotels making public commitments to improving sustainability, this research contributes to our understanding of how hotels can better

engage their workforce in sustainability efforts and promote more sustainable operational models.

2.2 Literature review

Operating twenty-four-seven, hotels are resource-intensive operations that contribute significantly to environmental pollution and unsustainability (Nimri et al., 2020). Adverse effects include biodiversity loss, air and water pollution, and increased greenhouse gas emissions, all of which necessitate urgent action to minimise the industry's ecological footprint (Chua et al, 2022).

To curb these consequences, planning and controlling environmental operations becomes a necessity (De Burgos-Jiménez et al., 2002), leading to the adoption of new eco-friendly practices. What began as the greening of hotel accommodations (Nicholls and Kang, 2012) has been formalised in the emergence of certified “green hotels,” which demonstrate their commitment to environmental stewardship by practising resource-efficient consumption (Nimri et al., 2020). Certification can result in several advantages, including effective waste management, cost reduction, enhanced market positioning, minimisation of environmental health risks, and improved well-being of host communities (Chan and Wan, 2023). Recently, sustainability has also become an important factor for travellers, with hotels implementing eco-friendly practices to enhance their brand image and traveller ratings (Mao et al., 2023), and attracting guests willing to pay a premium for responsible accommodations (Damigos, 2023). Government policies, regulations, and financial assistance for sustainable initiatives can also compel hotels to adopt environmentally friendly practices (Reddy et al., 2020). However, the contributions of hotel employees to sustainability initiatives have only recently begun to receive attention (Eisenberger et al., 2019; Martínez-Martínez et al., 2019). This is despite employee involvement in green operations being essential to building a perception of green authenticity (Chua et al, 2022). In this section, we will explore the role of employees in hotel sustainability initiatives, propose employee engagement theory as a key theoretical lens for understanding the success of these initiatives, and outline our research objectives.

2.2.1 The role of employees in hotel sustainability initiatives

Employees are crucial to the implementation and feasibility of sustainable practices in the tourism sector (Mo et al., 2022; Nisar et al., 2021), with employee work ethic directly responsible for pro-environmental behaviours (Peng et al, 2019). Their day-to-day behaviours set the baseline for sustainability, especially in hotels (Abdou et al., 2020; Chan et al., 2014) due to their pivotal role in enacting initiatives such as energy conservation (Gössling et al., 2023; Salehi et al., 2021) food waste reduction (Goh et al, 2019), and water saving (Deng et al, 2002). Hotel employees also serve as frontline ambassadors of sustainability, directly influencing the proliferation of environmental practices and policies among other stakeholders, such as suppliers and customers (Tandon et al., 2023; Tuan, 2018). However, limited empirical research has focused on the role of employees in the development and implementation of sustainability initiatives in the hotel industry (Su et al, 2019)

Existing research indicates a strong link between green self-efficacy and pro-environmental behaviours (Akram et al., 2025), indicating that employees who understand and feel connected to sustainability efforts are more productive and promote positive change, such as waste reduction and energy efficiency. They foster a sense of ownership and are committed to achieving sustainability goals (Weaver et al., 2013). The importance of employees engaging with sustainability initiatives appears to proliferate across all levels of the organisation (Irani et al., 2022). Hotel leaders cultivate a culture of environmental consciousness through training, management styles and performance standards (Mittal et al, 2016; Moin et al., 2021), while employees enact changes to operational practices (Xie et al., 2019). Change is underpinned by knowledgeable and motivated employees who actively engage in and advocate for sustainable practices (Martínez-Martínez et al., 2019; Rupp et al., 2018). Therefore, effective knowledge transfer and training are crucial in guiding both new and existing employees when implementing sustainability initiatives (Chan et al., 2014, Pham et al., 2019). However, in an industry where turnover rates are 10% to 15% higher than average (Dwesini, 2019), there is a concern that employee turnover creates a barrier to engendering knowledge of, and motivation to follow, sustainability

initiatives (Legrand et al., 2022). New employees lack understanding of basic hotel practices (Amin and Tarun, 2019), let alone the competence to reshape those practices to become more sustainable (Tandon et al., 2023). Hospitality literature emphasises that high levels of employee engagement can play a role in reducing turnover rates by fostering greater job satisfaction and strengthening organisational commitment (Saleem et al., 2021), and corporate social responsibility literature suggests that fostering higher levels of engagement improves the success of environmental and social initiatives (Hahn et al., 2024). Therefore, we draw on employee engagement theory to provide a framework for understanding the role of hotel employees in implementing sustainability initiatives.

2.2.2 Employee engagement in sustainability initiatives

Kahn (1990) Employee Engagement Theory is particularly relevant to hotel employees' involvement, especially in sustainability, as the emotional, cognitive, and physical dimensions contribute to fostering proactive employee behaviours.

Emotional engagement reflects employees' feelings and connections toward work and the organisation (Kahn, 1990). When hotel employees feel a sense of belonging and pride in their commitment to sustainability, they are more likely to advocate for eco-friendly initiatives (Saks, 2019). This emotional connection fosters a supportive work environment, encouraging employees to share ideas and collaborate with colleagues, thus enhancing overall engagement (Han et al., 2023). This emotional investment benefits the organisation's sustainability efforts and contributes to a more positive work environment where employees feel valued and motivated (Zientara et al, 2018). Emotionally engaged employees are more likely to communicate sustainability efforts to guests, enhancing the overall guest experience and fostering a shared responsibility for environmental stewardship (Acampora et al., 2022).

Cognitive engagement involves employees' mental investment in their roles (Kahn, 1990). When employees are cognitively engaged, they understand the significance of sustainability initiatives (Graham et al., 2023). They are more likely to contribute innovative ideas (Saks, 2019), leading to enhanced motivation and commitment that,

in turn, improve environmental practices (Shuck et al, 2010). This aligns with the proactive behaviours that drive organisational improvement and foster a culture of sustainability within hotels (Chua et al, 2022). This is particularly relevant in the tourism sector, where employees' understanding of sustainability can directly impact their behaviours and the overall effectiveness of sustainability initiatives (Knezevic Cvelbar et al., 2024). Further, employees who are mentally invested in their work are more likely to engage in problem-solving and critical thinking, which can lead to the identification of new practices that reduce waste, conserve energy, and enhance resource efficiency (Shuck et al, 2010).

Physical engagement pertains to the active participation of employees in their roles (Kahn, 1990). Engaged employees who are physically present are crucial for successfully implementing green initiatives (Kim et al 2017, Pam et al,2019). Their active participation contributes to sustainability efforts by reinforcing a favourable organisational climate which encourages innovation and adaptability (Van Nguyen et al., 2021). Physically engaging in their work has also been shown to improve employee satisfaction and guest experiences, ultimately leading to more successful hospitality operations (Yadav et al, 2019).

The current literature, however, reveals significant gaps in the understanding employee engagement in sustainability initiatives. Studies by Smith (2021) and Hwang et al. (2021) focus on emotional dynamics but overlook the effects of emotional engagement on sustainability commitment. Similarly, Minkiewicz et al. (2014) discuss cognitive engagement from a customer perspective without addressing the impact of employees on operational effectiveness and environmental performance. This highlights the need for studies on employees' perceptions of sustainability practices and their influence on engagement levels (Ashraf et al., 2012). Although research on employee engagement and sustainability is limited, Weaver et al. (2013) highlight that although many hotels engage with local communities and promote social dimensions of sustainability, employee involvement in these initiatives is often overlooked. This underscores the need for a more holistic understanding of the role of employee engagement in driving sustainable practices within the hotel industry and how to improve it. Therefore, this

paper aims to investigate the importance of employee engagement in hotel sustainability initiatives and explore the factors that facilitate improving employee engagement in these initiatives. In doing so, we also address how increasing engagement can motivate and empower employees to implement and promote sustainable practices.

2.3 Methodology

Given the exploratory objectives of this research, an abductive qualitative approach was adopted. The analysis began with inductive coding to allow themes to emerge from the data, followed by iterative engagement with relevant theoretical frameworks was chosen to gain in-depth insights from employees and managers in the hotel industry regarding their engagement with sustainability initiatives (Miles et al, 1994). We employ a semi-structured interview approach to identify and categorise themes and patterns to understand the complexities of human experiences and behaviours within a specific context (Gioia et al., 2013). A qualitative approach was chosen because of its utility in understanding how something happens, as opposed to what and how often (Lune et al, 2017).

2.3.1 Interview Procedure

Over four months, thirty five semi-structured interviews were conducted with UK employees of hotels with public commitments to sustainability. Interviews were conducted in English, as all employees conversed in this language (Table 2).

Table 2: Participant Overview

Participant Number	Position	Hotel Classification	Green Hotel Certified
P1	Hotel Supervisor	Independent	No
P2	HR Manager	Independent	Yes
P3	SGD Manager	Chain	Yes
P4	Operation Manager	Independent	Yes
P5	General Manager	Chain	Yes
P6	Housekeeper	Independent	Yes
P7	Head Chef	Independent	Yes
P8	Maintenance Staff	Chain	Yes
P9	Event Manager	Independent	No
P10	Hotel Manager	Chain	Yes
P11	Front Office	Chain	Yes
P12	Operation Manager	Independent	No
P13	Housekeeper	Chain	Yes
P14	Hotel Owner	Independent	No
P15	Food & Beverage Manager	Independent	No
P16	Regional Director of Sales	Chain	Yes
P17	General Manager	Chain	Yes
P18	Food & Beverage Crew	Chain	Yes
P19	Front Office Staff	Chain	Yes
P20	Kitchen Crew	Independent	Yes
P21	Training Manager	Independent	No
P22	Housekeeper	Chain	Yes
P23	Housekeeper	Chain	Yes
P24	General Manager	Chain	Yes
P25	Bartender	Independent	No
P26	Housekeeper	Chain	Yes
P27	Hotel Owner	Independent	Yes
P28	Spa Manager	Independent	Yes
P29	Hotel Owner	Independent	No
P30	Commercial Director	Independent	No
P31	Trainee	Independent	Yes
P32	Housekeeper	Independent	Yes
P 33	Front Office Staff	Independent	Yes
P 34	Room Division Manager	Independent	Yes
P35	Breakfast Manager	Independent	Yes

The study targeted hotel employees at all levels, including senior managers, department managers, and operational employees. Including managers and employees in this study is essential as it provides a complete view of how engagement impacts organisational outcomes (Albrecht, 2011). Managers offer insights into strategic goals, while employees share their daily experiences, motivations, and challenges (Saks, 2006). Employee engagement research typically considers both perspectives because integrating them helps bridge the gap between management strategies and employee experiences (Liao, 2022). It has also been suggested as leading to more accurate findings (Macey et al, 2008).

Interviews lasted 45–120 minutes and were a mix of online (via Zoom) and in-person, depending on participants' preferences. Some participants highlighted the demanding nature of their schedules, thus preferring online interviews, as they provided greater flexibility regarding time and location (Bryman, 2016). While online interviews may limit non-verbal cues, such as body language, they improved accessibility and comfort for participants, helping them stay engaged (Bryman, 2016). To address potential disruptions, pre-interview testing and a backup plan for technical issues were implemented, ensuring smoother data collection (Clark et al., 2023). To ensure privacy, interviews were held individually, and all recordings were deleted after transcription to maintain anonymity (Bryman, 2016).

2.3.2 Data Analysis

The data analysis is grounded in qualitative content analysis, which allows for a systematic exploration of the data, ensuring that the voices of the participants are accurately represented (McGinley et al., 2021). The analysis commenced with the research team independently reviewing the transcripts to identify initial themes that emerged from the data. This process is crucial as it allows themes to surface organically from the participants' narratives, reflecting their authentic experiences and insights (Bell et al, 2014). The Gioia methodology (Gioia et al., 2013) emphasises the importance of maintaining the informants' perspectives throughout the analysis, ensuring that the findings are grounded in actual experiences. This approach is particularly effective in inductive research as it allows for a systematic approach to

data analysis while preserving the informants' perspectives. By utilising the Gioia and Pitre (1990) methodology, this research provides a nuanced understanding of how hotel employees perceive and engage with sustainability initiatives (Barber et al, 2014), ultimately contributing to the broader discourse on sustainable practices in the tourism industry.

Following the initial thematic identification, the research team collaborated to refine these themes and develop broader categories. This phase involved examining the relationships between the identified themes to form more abstract categories that encapsulated the essence of the data (Bell et al, 2014). The use of qualitative analysis software (NVivo) facilitated this process by allowing the researchers to organise and visualise the data effectively, enhancing the rigour of the analysis (Fereday et al, 2006).

Throughout the analysis, the researchers maintained a focus on ensuring the validity and reliability of the findings. This was achieved through multiple rounds of discussions among team members to reach a consensus on the identified themes (Xiao et al, 2007). The final themes were then contextualised within the existing literature on employee engagement and sustainability initiatives in the tourism industry and presented at a public engagement event, where several participating hotels provided feedback on the salience of our interpretation. This contextualisation allows for a richer understanding of the findings and their implications for practice.

2.4 Findings

This section highlights the key themes and patterns that emerge from the interviews. It provides insights into the engagement experiences of hotel employees and the factors that facilitate achieving greater engagement levels. Although the sample included employees from both chain and independent hotels, no significant differences were observed in how sustainability was understood or enacted across these organisational contexts. The findings therefore focus on shared patterns across hotel types.

2.4.1 Importance of Employee Engagement

Analysis reveals that employee engagement plays a crucial role in hotel operations. P5 (General Manager) states: *“With over 35 years of experience managing different types of hotels, I can confidently say that nothing gets done without my staff.”* While employee engagement is vital across all operations, this becomes even more important for sustainability initiatives, as P5 continues, *“...their involvement and contribution are key to making sustainability possible.”* Owners and managers repeatedly emphasised the importance of employee engagement to sustainability from the outset, with P27 (Hotel Owner) implementing checks as part of the recruitment process: *“I ensure that my staff are genuinely committed to sustainability when they join our hotel. When employees have this willingness, it becomes easier to foster their engagement in sustainability initiatives.”*

Employees also seemed acutely aware of their role in hotel activities and their contributions to sustainability practices: *“Sustainability is at the heart of every discussion in our hotel. With our new plan, we are committed to saving energy and water by the end of 2024.”* (P8, Maintenance Staff). *“A hotel without its staff is like a school without teachers and administrators—it simply can’t function. The staff are the backbone, bringing everything to life and making all the activities and successes possible, especially when we are talking about sustainability.”* (P19, Front Office Staff). These insights emphasise that employee engagement goes beyond task completion. It involves recognising and valuing employees' contributions to maintaining operational efficiency and delivering guest satisfaction, without which hotels would struggle to function effectively.

Participants articulated that engagement involves a deeper connection to their roles and the organisation (Marinakou et al, 2019) and is a critical driver of sustainability within hotel operations. However, employee engagement is a complex and multifaceted construct, encompassing emotional, cognitive, and physical aspects. These themes will be used to structure the remaining chapter, where we draw on (Kahn, 1990), three dimensions of employee engagement to frame the facilitators of employee

engagement in sustainability initiatives within hotel operations (see Table 3 for a summary of themes).

Table 3: Facilitators of Employee Engagement in Hotel Sustainability Practices

Dimensions of Employee Engagement	Facilitators:
Emotional Engagement	<ul style="list-style-type: none"> • Recognition, Reward & Reinforcement • Employee Involvement in Decision-Making • Managerial Support and Commitment
Cognitive Engagement	<ul style="list-style-type: none"> • Access to Information • Engaging Minds • Appropriate Training
Physical Engagement	<ul style="list-style-type: none"> • Clear Communication Goals • Co-Participation in Shared Activities • Appropriate Resources • Willingness to Change • Reducing Staff Turnover

2.4.2 Emotional Engagement

The emotional connection that employees feel towards their roles and an organisation's sustainability goals significantly influences their behaviour, commitment, and overall job satisfaction (Kahn, 1990). Data shows that several themes influence emotional engagement, particularly recognition, reward, and punishment systems, employee involvement in decision-making, and managerial support.

2.4.2.1 Recognition, Reward and Reinforcement

Reward and recognition systems acknowledge employees' contributions to sustainability and can enhance emotional engagement, as evidenced by various reward schemes in the data. For example, P10 (Hotel Manager) describes their food waste reward initiative: *“This system tracks the efforts made by employees to minimise waste, and if they consistently meet reduction targets throughout the month, they are eligible for various rewards, a staff night out, additional time off, or other team-based activities. By rewarding collective efforts, we create a positive and engaging work environment while reducing our environmental impact.”*

Rewarding staff can also be achieved through more *ad hoc* initiatives. An innovative example comes from P24 (General Manager): *“We did a fashion show for each*

department where they had to design clothes out of anything that was wasted: paper, plastic packaging materials, all that kind of stuff, as a fun way of illustrating how much waste we are producing...Teams that produce the best fashion designs from waste materials receive rewards for their creativity and effort.”

From an employee perspective, such initiatives are positively recognised, with P13 (Housekeeper) recalling: *“I was awarded a prize for my idea on collecting rubbish and separating them from guest rooms, which received positive feedback from the guests.”* Employees who feel their efforts are valued are more likely to develop emotional connections to their work. Research demonstrates that organisations implementing recognition programs for sustainability initiatives foster a sense of employee pride, morale, and commitment (Stephens, 2021). In turn, this fosters a sense of ownership of sustainability, ultimately leading to operational efficiencies. This aligns with findings in employee engagement research, which suggests that celebrating achievements can enhance overall engagement and encourage others to contribute to initiatives (Weaver et al., 2013).

Conversely, when recognition does not occur, employees feel that their contributions are insignificant, leading to disengagement, as demonstrated by P6 (Housekeeper): *“I feel like I’m just one person among many in this hotel, and my manager only cares about whether the work gets done. They don’t know if I’m practicing sustainability or not.”* This comment reflects a broader challenge for individual employees that might not have the authority, resources, or platform to drive change, especially in large-scale systems, leading to perceptions of hopelessness as P6 (Housekeeper) continues *“...it’s hard for me to make any significant changes on my own.”*

This perception can partially be attributed to a lack of visible outcomes from sustainability initiatives, as highlighted by Khalil et al. (2024), who emphasise the importance of demonstrating the impact of sustainability practices on overall hotel performance. This is underscored by hotel management, made efforts to show employees how their actions contributed to measurable improvements. This visibility was valued by staff, as illustrated by one F&B assistant: Such openness is also noted

and appreciated from the employee perspective: *“Last month, I suggested to my manager that simply asking guests if they wanted bread with their soup could help reduce bread waste. She asked us to implement the idea over the week and report back with feedback. After a week, she shared that we had successfully reduced 5 kg of bread waste. She rewarded me with a mug featuring our favourite football team.”* (P18, F&B Crew). This is consistent with research by Fatima (2023), who indicate that when hotel management rewards sustainability, it leads to more effective implementation of sustainability strategies. Furthermore, it aligns with research indicating that when employees have clear visibility of results and are recognised for their contributions, it enhances motivation and engagement (Weaver et al., 2013). Yet, when this is lacking, it becomes a barrier to employees engaging in sustainability practices.

2.4.2.2 Employee Involvement in Decision-Making

When employees feel their voices are heard and their opinions matter, they are more likely to engage with, commit to, and develop a sense of ownership of sustainability initiatives. This plays out on several occasions in the data from the manager's perspectives: *“I would ask each of my staff to share their thoughts and ideas on the green practices they’ve implemented or are considering in their departments. Ask them to explain how these initiatives can help reduce waste, conserve resources, or improve sustainability... Their insights are important as we continue to enhance our environmental efforts.”* (P21, Training Manager). *“I rely on my staff to help drive sustainability. For example, after receiving feedback from the team, we’re upgrading the menu to feature more local food and highlighting this in the menu area. It’s a simple yet impactful change that aligns with our long-term sustainability goals.”* (P7, Head Chef).

Practising such initiatives helps management teams understand how to improve operations to enhance sustainability practices. It also helps avoid conflict when procedural mandates are less well-received, making employee feedback vital in guiding management to make necessary adjustments, such as with P8 (Maintenance Staff): *“We have monthly Green Team meetings, and my manager always comes prepared, providing updates on work completed during the past week or sharing*

feedback received from guests. For example, in the last meeting, he mentioned the need to make changes in the plant room to enhance the sustainability of the swimming pool, then we suggested to start with improving the lighting before moving on to other activities, and he agreed with that.” The practice of managers discussing feedback and explaining the rationale behind sustainability initiatives is essential for building trust and reinforcing the relevance of sustainability goals. Research indicates that when employees comprehend the broader context and consequences of their actions, they are more likely to be motivated to participate in sustainability efforts (Weaver et al., 2013). Allowing employees to contribute ideas through regular feedback channels empowers employees and ensures that the sustainability strategies are practical and aligned with the workforce's capabilities.

Conversely, if the workplace environment does not prioritise involving employees in decision-making, they become disillusioned and less emotionally invested in their work: *“There’s a lot of opportunity to improve sustainability in the hotel. For example, when we take lunch, we have 30 minutes, but there’s no communication between employees and management. We eat in different areas, and that creates a disconnect. If we all sat together, regardless of our positions, it would create more of an emotional connection. This way, managers could talk to us directly, which could help increase our understanding and involvement in sustainability.”* (P6, Housekeeper). *“... (Owner of the hotel) watches every penny, regardless of whether they’re sustainable. I tried to express my concerns, but he just told me I didn’t understand hotel operations, even though I’ve been in the industry for 36 years. So, I decided to stay quiet!”* (P1, Hotel Supervisor). A culture that does not foster participation and emotional connections can lead to disengagement and reduced involvement in sustainability initiatives (Ahmad Nizam et al., 2024). However, listening to employees is only one aspect of achieving an authentic participatory culture. Management must be open to acting on employee suggestions to refine operations to align with sustainability goals.

2.4.2.3 Managerial Support and Commitment

One of the most significant facilitators of emotional engagement identified in the data is the manager’s support and commitment towards sustainability initiatives.

Managerial support can take various forms, for example, investigating the practicality of employee suggestions. P28 (Spa Manager) describes a productive chat with one of the masseuses who *“suggested that reducing the number of towels in the massage room could support our sustainability efforts. After calculating the potential impact...around £3,000 per year and reducing water and energy consumption...we implemented this change and have noticed positive results, with no complaints from guests.”*

Further, managers show support by being available for questions and providing opportunities for employees to contribute ideas, as illustrated by P13 (Housekeeper): *“My manager is always available to discuss sustainability matters and answer any questions I may have. She sometimes provides us with surveys to share our ideas or raise any concerns, and she explains the feedback during meetings.”* This allows employees to feel supported in their contributions, a key factor in increasing emotional engagement (Minkiewicz et al., 2014). Managers also need to communicate their support and commitment to sustainability clearly, as P5 (General Manager) demonstrated: *“As a manager, I believe in leading by example. I actively involve my team in sustainability discussions and am always open to their feedback. Their input is vital to achieving our environmental goals.”* Managers with a strong understanding of hotel operations, particularly regarding sustainability practices, can effectively encourage and inspire more employee engagement.

When hotel leaders fail to demonstrate a genuine commitment to sustainability, employees can feel undervalued and disengaged (Kasa et al., 2020). For example, P6 (Housekeeper) claims, *“My manager doesn’t seem to prioritise my efforts to protect the environment, likely because he hasn’t worked in the hotel industry before.”* This can be particularly damaging given the role managers play as role models to employees. When managers fail to show commitment, employees feel disappointed and believe their efforts are not valued: *“Commitment from all staff is crucial, as engagement between employees and management plays a significant role. However, I believe that managers’ commitment is the most important factor, as it sets the tone from*

the top down. If I see my manager neglecting simple actions, like turning off the lights, it undermines my motivation!” (P20, Kitchen Crew)

“I tried to separate the waste while preparing food, but my manager scolded me and insisted I work faster, disregarding the importance of waste separation... so I don’t bother myself anymore.” (P18, F&B Crew). Collective engagement fosters a culture of responsibility and drives the success of sustainability initiatives. When employees perceive a lack of commitment from leaders, it can lead to decreased emotional engagement, morale, and commitment among employees, ultimately hindering sustainability efforts and potentially creating a hostile workplace culture.

2.4.3 Cognitive Engagement

Cognitive engagement can either facilitate or hinder employees’ mental investment in their roles. Access to information, engaging employees’ minds and appropriate training are the main facilitators of cognitive engagement.

2.4.3.1 Access to Information

One of the most straightforward ways to engage employees cognitively is by providing them with access to relevant sustainability information. Being informed and knowledgeable is vital if frontline employees are to translate sustainability strategies into practice. Employees with the necessary information can better understand their roles in sustainability efforts and contribute meaningfully. P27 (Hotel Owner) confirms this: *“... we don’t walk around saying, ‘Turn that off.’ We walk around, saying, ‘If you turn that tap off...’ Then you know all of it. It all saves the environment. And I would explain, you know, ‘if we have 10 of you leaving a tap on for an hour a day, how much water do you think that uses?’ When I explain it to them, they understand a bit more.”*

Employees allowed to learn about the tangible effects of their behaviour become more informed and motivated to change their habits. Accessible and relatable information is essential in driving cognitive engagement and promoting responsible behaviour in the workplace. Ultimately, it fosters a culture of sustainability where employees feel empowered to make informed decisions that have a positive impact. Presenting a clear

and logical overview of sustainability initiatives is one way to achieve this: *“The previous year’s waste costs reached nearly £90,000, while they should have been around £35,000 to £40,000. By implementing proper waste management, we’ve reduced our annual expenses to under £40,000 and recovered about £30,000 from the waste management company. I discussed this with my team members and now they are more concerned about waste.”* P4 (Operations Manager). This example underscores the importance of cognitive engagement, facilitating a deeper understanding of practices and processes, and ultimately educating employees on the impact of their practices.

Conversely, when hotel employees lack awareness and understanding of sustainability practices and their role in contributing to them, it has been suggested that this leads to disengagement and a lack of motivation to participate (Khatter et al., 2021). This is evidenced by P6 (Housekeeper), who comments, *“...why should I care about water conservation, especially considering that Scotland has a plentiful water supply?”* This highlights significant cognitive engagement barriers stemming from a lack of awareness and understanding, reflecting a fundamental knowledge gap regarding the broader implications of sustainability. We also see this lack of awareness, meaning some employees struggle to see their role in sustainability: *“I’m on a zero-hour contract. I’m not 9 to 5. So, I guess because I am not full time, they never ask me about it because I am no one!”* (P20, Kitchen Crew). Barriers stemming from a lack of awareness and understanding significantly impede cognitive engagement in the workplace, particularly in sustainability efforts. Employees may not fully grasp the importance of sustainability practices or how their actions contribute to broader environmental goals. While the logical mechanism for supplying sustainability knowledge is through training, participants were critical of how sustainability training was implemented.

2.4.3.2 Appropriate Sustainability Training

A very notable finding is that most operational employees questioned the value of the sustainability training they received. When employees are not adequately trained, they struggle to understand the importance of environmental management practices and

their roles in implementing them. For example, P6, (Housekeeper) comments: *“I only got training on my daily tasks and health and safety when I started. I’ve worked as a housekeeper here for 26 years, but no one has ever taught me about sustainability or why it matters.”*, while P11 (Front office staff) highlighted: *“I remember having online training about sustainability, but to be honest, I didn’t pay much attention because it was boring and not practical.”* This training gap limits employee awareness and diminishes the ability to contribute meaningfully to the hotel's sustainability goals. Comprehensive training that includes sustainability education is crucial for fostering cognitive engagement and empowering employees to contribute to a greener workplace. When training programs are perceived as tedious or impractical, employees are less likely to engage with the material, leading to a lack of understanding and awareness of sustainability practices. In the case above, the employee's disengagement suggests that the training did not connect with their daily experiences or offer actionable insights, ultimately hindering their ability to contribute to sustainability efforts. This highlights the need for more engaging, relevant, and practical training programs to inform and inspire employees about sustainability initiatives.

2.4.4 Physical Engagement

Physical engagement in the hotel industry refers to the tangible involvement of employees in sustainability practices. These behaviours do not need to be complex, with P18 (F&B Crew) providing a simple example: *“We have a ‘turn off’ policy in place that requires our employees to turn off lights wherever they see they are not in use”* however, without these physical actions, achieving sustainability initiatives is near impossible. Therefore, understanding the facilitators for physical engagement, such as clear communication from managers, co-participation in activities, appropriate resources, and reduced staff turnover, are essential in delivering sustainable initiatives.

2.4.4.1 Clear Communication of Expectations

Effective communication regarding sustainability expectations can significantly enhance physical engagement. When hotel employees understand their organisation's sustainability objectives, they are more likely to align their actions. This clarity can be achieved through regular meetings, newsletters, and visual reminders in the workplace

that emphasise the importance of sustainability initiatives. For example, P3 (ESD Manager) commented: *“I always inform my staff about the importance of sustainable practices, explaining why and how they should implement them. I also highlight the benefits these efforts bring to the hotel and their positive impact on future generations.”* P7 (Head Chef) ensures visual reminders of sustainability initiatives: *“I place signage in the kitchen and restrooms to raise awareness about sustainability, as many staff members are unfamiliar with the topic.”* This visual reinforcement reminds employees of their roles in sustainability efforts during daily tasks. When employees receive regular reminders of the importance of sustainable practices, they are more likely to actively practice these behaviours.

2.4.4.2 Co-participation in embedding practices

Employee behaviours are notably important in waste segregation and recycling programs. Physical engagement in waste management appears to be improved by hands-on training and active participation in waste separation practices. By working directly alongside employees, chefs and managers can reinforce proper waste-sorting techniques as evidenced by P7 (Head Chef): *“It’s mandatory for our staff to separate waste in the kitchen. As a chef, I often work alongside them during busy hours and closing time to ensure they understand how to properly sort the waste”* and P17 (General Manager): *“I demonstrate to my staff, particularly the housekeepers, the importance of separating waste while cleaning guest rooms. This practice streamlines the workflow and encourages more efficient waste management.”* Managers’ hands-on involvement helps employees understand the importance of waste management and encourages them to take pride in their contributions, reinforcing the hotel's commitment to eco-friendly practices.

2.4.4.3 Appropriate Resources

To ensure physical engagement, employees also require the necessary resources, including sufficient time, funding, and appropriate equipment. However, a lack of these was particularly pronounced in smaller hotels, causing cynicism among employees about the authenticity of sustainability initiatives, as highlighted by P18 (F&B Crew) and P6 (Housekeeper), respectively: *“They refer to themselves as a*

“green hotel” and even have certifications, but I find that they use low-quality products that are not environmentally friendly; they’re just doing greenwashing for us.” They talk a lot about sustainability, but the cleaner I’m given to wash the toilets is cheap and not environmentally friendly. It feels like they’re more focused on greenwashing the customers than providing us with eco-friendly products. The employee's frustration with the organisation’s inconsistent approach to sustainability is evident – while there is much talk about it, employees lack the necessary resources to achieve it in practice.

Employees may also resist adopting new sustainability practices, particularly if they perceive these changes as adding to their workload or conflicting with established routines or cost structures. For example, P27 (Hotel Owner) comments: *“Purchasing raw materials from local suppliers is expensive. We’re located in a small town in the north of Scotland, and many of the product producers are from Europe. How can I achieve sustainability under these circumstances?”* while P29 (Hotel Owner) comments: *“Our guests seek a cosy and luxurious experience when paying £300-400 for a stay. If I compromise on their comfort for the sake of sustainability, I risk losing them.”* If sustainability efforts negatively impact comfort or service quality, it can lead to dissatisfaction and a loss of business. This discrepancy also highlights a lack of resource commitment to sustainable practices, which can decrease trust, motivation, and engagement, leaving employees feeling undermined by management decisions (Mittal et al, 2016).

Practising sustainability can be challenging from an employee perspective, too. In an industry where heavy workloads and time pressures affect employee well-being, sustainability initiatives can be overlooked in favour of immediate operational demands: *“I have 10 rooms to clean, and some of them are left in an absolute mess by the guests. Why should I focus on sustainability when my kids are at home alone?”* (P13, Housekeeper). Taking on additional responsibilities, such as sorting waste, can add to the stress of an already challenging job. This is reflected on by P21 (Training Manager): *“You are talking about the hotel industry, which loses a lot of staff. We have a shortage of staff; how can I give them additional tasks and let them suffer, causing*

them to leave?” Gomez et al (2023) suggest that emotional labour demands can lead to burnout, making it challenging for employees to fully engage in their roles.

2.4.4.5 High Employee Turnover

One of the most physically noticeable problems in hotels was the turnover of employees, which can disrupt continuity in sustainability engagement (Khatter et al., 2021). When employees frequently change, it becomes challenging to maintain a consistent understanding and commitment to sustainability practices. *“We can’t invest significantly in our staff since many may only stay with us for a few months or even just a few hours. Spending too much time and resources on training would be costly for the hotel and not feasible.”* P27 (Hotel Owner).

This reluctance to invest in staff is also noticed by employees with P22 (Housekeeper), commenting: *“Since I began working at this hotel, I’ve noticed that many colleagues leave, and I often wonder if I’ll see them again. It makes me think about whether management cares about keeping staff. Sometimes, it feels like we’re just seen as numbers rather than valued team members.”* These statements highlight a critical barrier to physical engagement. The hotel owner expressed concern about the cost-effectiveness of investing in employees, and employees noticed this. Together, these perspectives highlight how the transient nature of the workforce and the struggle to maintain adequate staffing impede physical engagement in sustainable initiatives, thereby limiting the hotel’s ability to foster a culture of responsibility and participation among employees.

2.5 Discussion

This paper explores the importance of employee engagement in hotel sustainability initiatives. Existing research, such as Wong et al. (2021), indicates that employees’ perceptions of Corporate Social Responsibility (CSR) significantly influence their job satisfaction and behaviour, but do not investigate how these perceptions translate into active engagement with sustainability practices. Our findings highlight the importance of engaging employees in sustainability initiatives, as sustainable practices can often conflict with the daily routines of busy and frequently temporary hotel staff. We

highlight several facilitators at the emotional, cognitive and physical level of employee engagement as critical components influencing how employees interact with sustainability practices in the hotel industry (see Table 3). From this, we make two significant theoretical contributions to each of the sustainable hotel and employee engagement literature.

2.5.1 Theoretical implications

The current study contributes to hotel sustainability literature, making new theoretical insights. First, by integrating employee engagement theory into the sustainable hotel context, we identify employee engagement as a critical factor in transitioning towards greater sustainability. Despite existing literature indicating the importance of employees in delivering sustainability initiatives (Abdou et al., 2020, Khalil et al., 2024), there is a limited empirical focus on employees themselves (Chua et al, 2022), and what exists is largely atheoretical (Khalil et al., 2024). We demonstrate not only the relevance of engagement theory to the sustainable hotel phenomenon but also define the constituent parts of engagement concerning sustainable employee behaviours, advancing our understanding of what green employee engagement entails.

Employee engagement literature has typically focused on the business-as-usual outcomes of employee engagement, such as employee loyalty, job performance and financial performance (Jyoti et al, 2022; Saks, 2019), with a limited focus on the sustainability outcomes (Alipour et al., 2019, Graham et al., 2023). It is also notable that much of the work since the development of the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2002) has been psychological and quantitative (Boccoli et al., 2023). Answering calls to provide more qualitative research to fully comprehend green workforce practices (Mahran et al., 2025), this project adopts a qualitative approach to understand organisational goals beyond the performative. In doing so, we contribute to the employee engagement literature by uncovering nuances that highlight the relative importance of the three dimensions of employee engagement when applied to a change management process, as opposed to business-as-usual.

Our data highlights emotional engagement as the most critical driver of organisational sustainability change. Emotional engagement appears to be the most crucial factor in fostering employee buy-in and facilitating workable solutions to complex problems. Employees who are emotionally connected to the cause tend to be more proactive and motivated to engage in sustainable behaviours, practices, solutions, and improvements, and are more likely to contribute to the successful implementation of these goals actively (Weaver et al., 2013). Emotional engagement is linked to employees' intrinsic motivation to participate (Hai et al, 2021), and when employees perceive their work as meaningful and aligned with their values, they are more likely to engage in behaviours that support sustainability goals. This intrinsic motivation can lead to innovative ideas and practices, enhancing the organisation's sustainability performance. Thus, fostering emotional engagement should be a primary focus for hotel managers aiming to cultivate a culture of sustainability. Consequently, the findings reveal that managerial support, recognition and reward systems significantly enhance emotional attachment to sustainability initiatives (Mahran et al., 2025).

While emotional engagement is paramount, in some situations, such as with part-time or seasonal employees, it may not be an efficient or effective way to implement sustainable practices. Instead, cognitive and physical engagement can be used to significantly promote sustainability initiatives (Albrecht et al., 2021). When employees are provided with clear information on sustainability goals and practices, they are more likely to understand their roles and contribute meaningfully to achieving them. Where this is lacking, employees struggle to understand the importance of sustainability practices, leading to disengagement and a lack of willingness to participate. The findings illustrate that hands-on involvement by managers fosters a sense of responsibility and pride amongst employees. However, a lack of resources, including time and equipment, can impede physical engagement, particularly in small hotels with limited budgets.

While recognising the fundamental importance of employee engagement in implementing sustainability initiatives, we further identify facilitators for enhancing employee engagement, highlighting the value of hotel employees in identifying

problems and as a source of solutions to sustainability issues. In fostering a supportive culture of open discussion, information sharing, explaining rationales for decisions, and seeking sense from employees, hotel leaders can foster an organic environment in which employees can voice and share their experience to both reduce the environmental impact of hotels, but also, in a number of our examples, save the hotel money.

Increasing employee engagement has a further, indirect route to pursuing sustainability programmes. In line with Dwesini (2019), the findings identify that high employee turnover is a significant challenge to implementing hotel initiatives. Our research indicates that the transient nature of the hospitality workforce disrupts all levels of enculturation and engagement, leading to difficulties in maintaining a consistent understanding of sustainability practices amongst the employee base. The literature has noted that high turnover rates can hinder the implementation of effective sustainability practices, as new employees may lack the necessary knowledge and commitment to contribute meaningfully (Tinwala et al, 2020). Research, however, has consistently shown increasing employee engagement promotes employee retention and reduces turnover (Karatepe et al., 2021, Jyoti et al, 2022, Wang et al., 2020). Maintaining the existing workforce can play a substantial role in ensuring a successful transition to greater levels of sustainability because investments in both formal and informal training and institutional knowledge remain within the organisation in the long term.

2.5.2 Managerial Implications

The insights gained from this study have significant implications for managers seeking to enhance sustainability initiatives. Firstly, managers must be aware of key areas of concern for employees, customers, and stakeholders and understand how these factors influence the communication and prioritisation of sustainability issues. By actively monitoring trends and external events, managers can frame sustainability messages that resonate with their audience and highlight the urgency of addressing sustainability challenges. Secondly, fostering a culture of empowerment and collaboration is crucial for enhancing employee engagement in sustainability initiatives. Managers can create

an environment where sustainability becomes a shared responsibility by involving employees in decision-making and providing them with the necessary resources and training. This participatory approach enhances employees' sense of ownership and ensures that sustainability strategies are practical and aligned with the workforce's capabilities. Lastly, the study highlights the importance of addressing barriers to engagement, including resource constraints and resistance to change. Managers must recognise that the successful implementation of sustainability initiatives requires adequate support and commitment from leadership. By prioritising sustainability within the organisational vision and creating open channels for communication, managers can facilitate a more effective sensemaking process that enables employees to navigate the complexities of sustainability.

2.6 Limitations and Future Research

Despite this study's valuable theoretical and practical contributions, several limitations exist. Firstly, the data collection focused on employees across various roles in the hotel industry. While this provided diverse insights into how staff engage with sustainability initiatives and highlighted the contextual factors influencing their participation, further research is needed to explore the effectiveness and impact of these engagement strategies on operational sustainability. Secondly, this study relied on interviews conducted over a specific period, illuminating employees' perceptions and motivations. However, sustainability engagement is an evolving process influenced by organisational culture, leadership commitment, and external pressures. Future research employing a longitudinal approach could provide deeper insights into how staff engagement in sustainability initiatives develops over time and how organisational changes impact employees' sense of ownership and commitment to sustainable practices. Conducting follow-up interviews after hands-on sustainability training could also provide insights into how employee engagement evolves. Expanding the study beyond the UK to explore staff engagement in different cultural and regulatory contexts would give a broader perspective on sustainability practices in the global hospitality industry.

2.7 References

- ABDOU, A. H., HASSAN, T. H. & EL DIEF, M. M. 2020. A description of green hotel practices and their role in achieving sustainable development. *Sustainability*, 12, 9624.
- ACAMPORA, A., PREZIOSI, M., LUCCHETTI, M. C. & MERLI, R. 2022. The role of hotel environmental communication and guests' environmental concern in determining guests' behavioral intentions. *Sustainability*, 14, 11638.
- AHMAD NIZAM, S. N. E. S., MOHAMAD SABER, J., SALIM, A., ZAIDI, N. A. & BAHARI, K. A. 2024. Examining the impact of job demand resource theory variables on burnout among hotel employees in Kuala Lumpur. *Journal of Tourism, Hospitality and Culinary Arts*, 16, 489-513.
- AKRAM, Z., AHMAD, S., AKRAM, U., KHAN, A. G. & HAN, H. 2025. Redefining hospitality for a sustainable tomorrow: green human resource management and knowledge-oriented leadership at the forefront. *Journal of Sustainable Tourism*, 1-28.
- ALBRECHT, S. L. (Ed.). (2010/2011). *andbook of employee engagement: Perspectives, issues, research and practice*. Edward Elgar Publishing, Cheltenham.
- ALBRECHT, S. L., BOCKS, A., DALTON, J., LORIGAN, A. & SMITH, A. 2021. Pro-environmental employee engagement: The influence of pro-environmental organizational, job and personal resources. *Sustainability*, 14, 43.
- ALIPOUR, H., SAFAEIMANESH, F. & SOOSAN, A. 2019. Investigating sustainable practices in hotel industry-from employees' perspective: Evidence from a Mediterranean Island. *Sustainability*, 11, 6556.
- ALREAHI, M., BUJDOSÓ, Z., KABIL, M., AKAAK, A., BENKÓ, K. F., SETIONINGTYAS, W. P. & DÁVID, L. D. 2022. Green human resources management in the hotel industry: A systematic review. *Sustainability*, 15, 99.
- AMIN, S. & TARUN, M. T. 2019. Enhancing green hotel visit intention: role of green perceived value, perceived consumer effectiveness and environmental knowledge. *International Business Research*, 12, 123-132.
- ASHRAF, Z., JAFFRI, A. M., SHARIF, M. T. & KHAN, M. A. 2012. Increasing employee organizational commitment by correlating goal setting, employee

- engagement and optimism at workplace. *European Journal of Business and Management*, 4, 71-77.
- BARBER, N. A. & DEALE, C. 2014. Tapping mindfulness to shape hotel guests' sustainable behavior. *Cornell Hospitality Quarterly*, 55, 100-114.
- BAUM, T. & HAI, N. T. T. 2019. Applying sustainable employment principles in the tourism industry: righting human rights wrongs? *Tourism Recreation Research*, 44, 371-381.
- BELL, E. & WILLMOTT, H. (2014). *Qualitative research in business and management*. Sage, London.
- BOCCOLI, G., GASTALDI, L. & CORSO, M. 2023. The evolution of employee engagement: Towards a social and contextual construct for balancing individual performance and wellbeing dynamically. *International Journal of Management Reviews*, 25, 75-98.
- BRYMAN, A. (2016). *Social research methods*. Oxford University Press, Oxford.
- CHAN, E. K. & WAN, L. C. 2023. How eco-certificate/effort influences hotel preference. *Annals of Tourism Research*, 101, 103616.
- CHAN, E. S., HON, A. H., CHAN, W. & OKUMUS, F. 2014. What drives employees' intentions to implement green practices in hotels? The role of knowledge, awareness, concern and ecological behaviour. *International Journal of Hospitality Management*, 40, 20-28.
- CHUA, B.-L. & HAN, H. 2022. Green hotels: The state of green hotel research and future prospects. *Journal of Travel & Tourism Marketing*, 39, 465-483.
- CLARK, M., KANG, B. & CALHOUN, J. R. 2023. Green meets social media: young travelers' perceptions of hotel environmental sustainability. *Journal of Hospitality and Tourism Insights*, 6, 36-51.
- DAMIGOS, D. 2023. How much are consumers willing to pay for a greener hotel industry? A systematic literature review. *Sustainability*, 15, 8775.
- DARVISHMOTEBALI, M. & ALTINAY, L. 2022. Green HRM, environmental awareness and green behaviors: The moderating role of servant leadership. *Tourism Management*, 88, 104401.

- DE BURGOS-JIMÉNEZ, J., CANO-GUILLÉN, C. J. & CÉSPEDES-LORENTE, J. J. 2002. Planning and control of environmental performance in hotels. *Journal of Sustainable Tourism*, 10, 207-221.
- DENG, S.-M. & BURNETT, J. 2002. Water use in hotels in Hong Kong. *International Journal of Hospitality Management*, 21, 57-66.
- DWESINI, N. F. 2019. Causes and prevention of high employee turnover within the hospitality industry: A literature review. *African Journal of Hospitality, Tourism and Leisure*, 8, 1-15.
- EISENBERGER, R., ROCKSTUHL, T., SHOSS, M. K., WEN, X. & DULEBOHN, J. 2019. Is the employee–organization relationship dying or thriving? A temporal meta-analysis. *Journal of Applied Psychology*, 104, 1036.
- FATIMA, T. & ELBANNA, S. 2023. Corporate social responsibility (CSR) implementation: A review and a research agenda towards an integrative framework. *Journal of Business Ethics*, 183, 105-121.
- FEREDAY, J. & MUIR-COCHRANE, E. 2006. Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International journal of qualitative methods*, 5, 80-92.
- GIOIA, D. A., CORLEY, K. G. & HAMILTON, A. L. 2013. Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organisational Research Methods*, 16, 15-31.
- GIOIA, D. A. & PITRE, E. 1990. Multiparadigm perspectives on theory building. *Academy of Management Review*, 15, 584-602.
- GLAVAS, A. 2012. Employee engagement and sustainability: A model for implementing meaningfulness at and in work. *Journal of Corporate Citizenship*, 13-29.
- GOH, E. & JIE, F. 2019. To waste or not to waste: Exploring motivational factors of Generation Z hospitality employees towards food wastage in the hospitality industry. *International Journal of Hospitality Management*, 80, 126-135.
- GOMEZ, M. D. C. & CHAVEZ, C. C. 2023. Thriving in the New Normal: Exploring the Link Between Employees' Well-Being and Work Engagement. *British Journal of Multidisciplinary and Advanced Studies: Business and Management Sciences*, 4, 44-51.

- GÖSSLING, S., BALAS, M., MAYER, M. & SUN, Y.-Y. 2023. A review of tourism and climate change mitigation: The scales, scopes, stakeholders and strategies of carbon management. *Tourism Management*, 95, 104681.
- GRAHAM, S., CADDEN, T. & TREACY, R. 2023. Examining the influence of employee engagement in supporting the implementation of green supply chain management practices: A green human resource management perspective. *Business Strategy and the Environment*, 32, 4750-4766.
- HAHN, T., SHARMA, G. & GLAVAS, A. 2024. Employee-CSR tensions: Drivers of employee (dis) engagement with contested CSR initiatives. *Journal of Management Studies*, 61, 1364-1392.
- HAI, S. & PARK, I.-J. 2021. The accelerating effect of intrinsic motivation and trust toward supervisor on helping behavior based on the curvilinear model among hotel frontline employees in China. *Journal of Hospitality and Tourism Management*, 47, 12-21.
- HAN, Y., YANG, Y. & MOHAMED, R. 2023. A bibliometric analysis of work engagement in the hospitality and tourism industry. *Journal of Hospitality and Tourism Insights*, 6, 1946-1966.
- HUERTAS-VALDIVIA, I., LLORENS-MONTES, F. J. & RUIZ-MORENO, A. 2018. Achieving engagement among hospitality employees: A serial mediation model. *International Journal of Contemporary Hospitality Management*, 30, 217-241.
- HWANG, S., WALLER, R., HAWES, D. J. & ALLEN, J. L. 2021. The influence of antisocial behavior and callous-unemotional traits on trajectories of school engagement and achievement in South-Korean children. *Journal of Youth and Adolescence*, 50, 788-802.
- IRANI, F., KILIÇ, H. & ADESHOLA, I. 2022. Impact of green human resource management practices on the environmental performance of green hotels. *Journal of Hospitality Marketing & Management*, 31, 570-600.
- JYOTI, J. & DIMPLE 2022. Fun at workplace and intention to leave: role of work engagement and group cohesion. *International Journal of Contemporary Hospitality Management*, 34, 782-807.

- KAHN, W. A. 1990. Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33, 694
- KAMBOJ, S., MATHARU, M., LIM, W. M., ALI, F. & KUMAR, S. 2022. Consumer adoption of green hotels: Understanding the role of value, innovation, and involvement. *Journal of Hospitality Marketing & Management*, 31, 819-849.
- KARATEPE, O. M., REZAPOURAGHDAM, H. & HASSANNIA, R. 2021. Does employee engagement mediate the influence of psychological contract breach on pro-environmental behaviors and intent to remain with the organization in the hotel industry? *Journal of Hospitality Marketing & Management*, 30, 326-353.
- KASA, M., BIN YATIM, A., ENCHANG, F., YONG, D. & RAMLI, N. 2020. Job Burnout and Job Engagement Dimensions Among Hotel Employees in Sarawak: What Is the Relationship? *Research in World Economy*, 11, 207-212.
- KHALIL, N., CHE ABDULLAH, S. N., HARON, S. N. & HAMID, M. Y. 2024. A review of green practices and initiatives from stakeholder's perspectives towards sustainable hotel operations and performance impact. *Journal of Facilities Management*, 22, 653-682.
- KHATTER, A., WHITE, L., PYKE, J. & MCGRATH, M. 2021. Barriers and drivers of environmental sustainability: Australian hotels. *International Journal of Contemporary Hospitality Management*, 33, 1830-1849.
- KNEZEVIC CVELBAR, L., GRÜN, B. & DOLNICAR, S. 2024. Do employees hold the key to environmental sustainability in tourism businesses? Empirical evidence from a field study. *Journal of Sustainable Tourism*, 32, 245-258.
- LEGRAND, W., CHEN, J. S. & LAEIS, G. C. 2022. *Sustainability in the hospitality industry: Principles of sustainable operations*. Routledge, London.
- LIAO, Y. 2022. Sustainable leadership: A literature review and prospects for future research. *Frontiers in Psychology*, 13, 1045570.
- LUNE, H. & BERG, B. L. (2017). *Qualitative research methods for the social sciences*. Pearson, Harlow..
- MACEY, W. H. & SCHNEIDER, B. 2008. The meaning of employee engagement. *Industrial and organisational Psychology*, 1, 3-30.

- MAHRAN, K., IBRAHIM, B. A., ALBARRAK, H. & ELAMER, A. A. 2025. Green workforce in tourism and hospitality: A systematic review and future research agenda. *International Journal of Hospitality Management*, 131, 104325.
- MAO, Z., YANG, Y. & ZHOU, J. 2023. Are GreenLeaders also performance leaders? An econometric analysis of TripAdvisor hotel certification of GreenLeaders. *Journal of Sustainable Tourism*, 31, 2150-2172.
- MARINAKOU, E. & GIOUSMPASOGLU, C. 2019. Talent management and retention strategies in luxury hotels: evidence from four countries. *International Journal of Contemporary Hospitality Management*, 31, 3855-3878.
- MARTÍNEZ-MARTÍNEZ, A., CEGARRA-NAVARRO, J.-G., GARCIA-PEREZ, A. & WENSLEY, A. 2019. Knowledge agents as drivers of environmental sustainability and business performance in the hospitality sector. *Tourism Management*, 70, 381-389.
- MCGINLEY, S., WEI, W., ZHANG, L. & ZHENG, Y. 2021. The state of qualitative research in hospitality: A 5-year review 2014 to 2019. *Cornell Hospitality Quarterly*, 62, 8-20.
- MIAH, M., SZABÓ-SZENTGRÓTI, G. & WALTER, V. 2024. A systematic literature review on green human resource management (GHRM): an organizational sustainability perspective. *Cogent Business & Management*, 11, 2371983.
- MILES, M. B. & HUBERMAN, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage, Thousand Oaks, CA.
- MINKIEWICZ, J., EVANS, J. & BRIDSON, K. 2014. How do consumers co-create their experiences? An exploration in the heritage sector. *Journal of Marketing Management*, 30, 30-59.
- MITTAL, S. & DHAR, R. L. 2016. Effect of green transformational leadership on green creativity: A study of tourist hotels. *Tourism Management*, 57, 118-127.
- MO, Z., LIU, M. T., WONG, I. A. & WU, P. 2022. The role of (in) congruence modes between supervisor prescriptive and descriptive norms on employee green behavior. *Tourism Management*, 93, 104627.

- MOIN, M. F., OMAR, M. K., WEI, F., RASHEED, M. I. & HAMEED, Z. 2021. Green HRM and psychological safety: How transformational leadership drives follower's job satisfaction. *Current Issues in Tourism*, 24, 2269-2277.
- NICHOLLS, S. & KANG, S. 2012. Going green: the adoption of environmental initiatives in Michigan's lodging sector. *Journal of Sustainable Tourism*, 20, 953-974.
- NIMRI, R., PATIAR, A. & JIN, X. 2020. The determinants of consumers' intention of purchasing green hotel accommodation: Extending the theory of planned behaviour. *Journal of Hospitality and Tourism Management*, 45, 535-543.
- NISAR, Q. A., HAIDER, S., ALI, F., JAMSHED, S., RYU, K. & GILL, S. S. 2021. Green human resource management practices and environmental performance in Malaysian green hotels: The role of green intellectual capital and pro-environmental behavior. *Journal of Cleaner Production*, 311, 127504.
- PENG, X. & LEE, S. 2019. Self-discipline or self-interest? The antecedents of hotel employees' pro-environmental behaviours. *Journal of Sustainable Tourism*, 27, 1457-1476.
- PHAM, N. T., TUČKOVÁ, Z. & JABBOUR, C. J. C. 2019. Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behavior in hotels? A mixed-methods study. *Tourism Management*, 72, 386-399.
- REDDY, V. A., SOLANKI, C. H., KUMAR, S., REDDY, K. R. & DU, Y.-J. 2020. Stabilization/solidification of zinc-and lead-contaminated soil using limestone calcined clay cement (LC3): an environmentally friendly alternative. *Sustainability*, 12, 3725.
- RUPP, D. E., SHAO, R., SKARLICKI, D. P., PADDOCK, E. L., KIM, T. Y. & NADISIC, T. 2018. Corporate social responsibility and employee engagement: The moderating role of CSR-specific relative autonomy and individualism. *Journal of Organizational Behavior*, 39, 559-579.
- SAKS, A. M. 2006. Antecedents and consequences of employee engagement. *Journal of managerial psychology*, 21, 600-619.
- SAKS, A. M. 2019. Antecedents and consequences of employee engagement revisited. *Journal of Organizational Effectiveness: People and Performance*, 6, 19-38.

- SALEEM, S., RASHEED, M. I., MALIK, M. & OKUMUS, F. 2021. Employee-fit and turnover intentions: The role of job engagement and psychological contract violation in the hospitality industry. *Journal of Hospitality and Tourism Management*, 49, 385-395.
- SALEHI, M., AMANAT, M., MOHAMMADI, M., SALMANIAN, M., REZAEI, N., SAGHAZADEH, A. & GARAKANI, A. 2021. The prevalence of post-traumatic stress disorder related symptoms in Coronavirus outbreaks: A systematic-review and meta-analysis. *Journal of Affective Disorders*, 282, 527-538.
- SCHAUFELI, W. B., SALANOVA, M., GONZÁLEZ-ROMÁ, V. & BAKKER, A. B. 2002. The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3, 71-92.
- SHUCK, B. & WOLLARD, K. 2010. Employee engagement and HRD: A seminal review of the foundations. *Human resource development review*, 9, 89-110.
- SMITH, M. L. E. 2021. Exploring the relationship between work engagement, collective teacher efficacy and transformational leadership in times of change.
- STEPHENS, D. O. 2021. Strategies to engage millennial employees (A multiple case study). *Open Journal of Business and Management*, 9, 618.
- SU, L. & SWANSON, S. R. 2019. Perceived corporate social responsibility's impact on the well-being and supportive green behaviors of hotel employees: The mediating role of the employee-corporate relationship. *Tourism Management*, 72, 437-450.
- TANDON, A., DHIR, A., MADAN, P., SRIVASTAVA, S. & NICOLAU, J. L. 2023. Green and non-green outcomes of green human resource management (GHRM) in the tourism context. *Tourism Management*, 98, 104765.
- TINWALA, R. & BISWAS, U. N. 2020. Perceived sustainability practices, turnover intentions, and organizational identification in hotel industries. *Management: Journal of Sustainable Business and Management Solutions in Emerging Economies*, 25, 1-11.
- TM, A., KAUR, P., BRESCIANI, S. & DHIR, A. 2021. What drives the adoption and consumption of green hotel products and services? A systematic literature

- review of past achievement and future promises. *Business Strategy and the Environment*, 30, 2637-2655.
- TUAN, L. T. 2018. Activating tourists' citizenship behavior for the environment: the roles of CSR and frontline employees' citizenship behavior for the environment. *Journal of Sustainable Tourism*, 26, 1178-1203.
- VAN NGUYEN, L. T., NGUYEN, P. N. D., NGUYEN, T. Q. & NGUYEN, K. T. 2021. Employee engagement in brand value co-creation: An empirical study of Vietnamese boutique hotels. *Journal of Hospitality and Tourism Management*, 48, 88-98.
- WANG, C., XU, J., ZHANG, T. C. & LI, Q. M. 2020. Effects of professional identity on turnover intention in China's hotel employees: The mediating role of employee engagement and job satisfaction. *Journal of Hospitality and Tourism Management*, 45, 10-22.
- WEAVER, D., DAVIDSON, M. C., LAWTON, L., PATIAR, A., REID, S. & JOHNSTON, N. 2013. Awarding sustainable Asia-Pacific hotel practices: Rewarding innovative practices or open rhetoric? *Tourism Recreation Research*, 38, 15-28.
- WONG, A. K. F., KIM, S. S., LEE, S. & ELLIOT, S. 2021. An application of Delphi method and analytic hierarchy process in understanding hotel corporate social responsibility performance scale. *Sustainable Consumer Behaviour and the Environment*. Routledge.
- XIAO, H. & SMITH, S. L. 2007. The use of tourism knowledge: Research propositions. *Annals of Tourism Research*, 34, 310-331.
- XIE, J., NOZAWA, W., YAGI, M., FUJII, H. & MANAGI, S. 2019. Do environmental, social, and governance activities improve corporate financial performance? *Business Strategy and the Environment*, 28, 286-300.
- YADAV, S. & MORYA, K. K. 2019. A Study of Employee Engagement and Its Impact on Organizational Citizenship Behavior in the Hotel Industry. *IUP Journal of Organizational Behavior*, 18.
- ZIENTARA, P. & ZAMOJSKA, A. 2018. Green organizational climates and employee pro-environmental behaviour in the hotel industry. *Journal of Sustainable Tourism*, 26, 1142-1159.

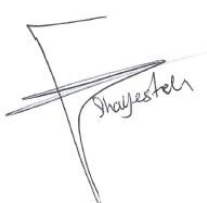
Reflexive bridge between Chapter II and Chapter III:

While the first paper established employee engagement as the motivational foundation for embedding sustainability in hotel operations, the interviews revealed that motivation alone is not enough. Many employees expressed enthusiasm for sustainability, often speaking passionately about reducing waste, conserving resources, or supporting local suppliers. Yet, as the conversations unfolded, it became clear that their ability to act on these intentions was constrained by a lack of practical understanding of what sustainability actually meant in the context of their daily work. During the interviews, I observed a distinct knowledge gap between managerial and operational staff while managers frequently referred to sustainability in strategic or abstract terms, operational employees described it in terms of routines, habits, and visible tasks. This divergence highlighted a critical tension: sustainability was being communicated as a policy goal from the top but interpreted as an individual effort at the front line.

These reflections raised new questions about the *forms* of sustainability knowledge employees hold and how these forms shape their capacity to contribute to sustainability in practice. I began to see that engagement: the emotional and motivational connection to sustainability, was only one part of a much larger picture. To truly understand how sustainability becomes part of everyday hotel life, it was necessary to look at how employees learn, share, and apply knowledge through their work. This realisation led to the focus of the second paper, which moves beyond motivation to explore the types and sources of sustainability knowledge that exist across different organisational levels. By examining how employees acquire and interpret what they know formally through training and informally through peer interaction the second paper uncovers the cognitive and social foundations that enable engagement to translate into meaningful, sustainable action.

**Chapter III- Engendering
Sustainability Knowledge in
Organisational Settings: An In-
depth Exploration of Hotel
Operations**

Statement of Authorship

This declaration concerns the article entitled:			
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The material has been published with a CC-BY license	<input type="checkbox"/>	The publisher has granted permission to replicate the material included here	<input type="checkbox"/>
Candidate's contribution to the paper (provide details, and also indicate as a percentage)	<p>The candidate contributed to / considerably contributed to / predominantly executed the...</p> <p>Designed and conducted all data collection and analysis (100%), on presentation in journal format: independently wrote full first draft and responded to supervisor commentary (90%).</p>		
Statement from Candidate	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature.		
Signed (typed signature)			Date
			12/12/2025

Abstract

Hotels significantly impact the environment through resource consumption and waste generation, making sustainability integration essential. This study explores how different forms of sustainability knowledge influence employees' engagement with sustainable practices in the UK hotel sector. Drawing on Kaiser and Fuhrer (2003) framework, which includes declarative, procedural, effectiveness, and social knowledge, this research introduces a fifth dimension: temporal knowledge, or knowing *when* to share and *when* to act. Based on thirty-five qualitative interviews, the findings show that temporal knowledge functions as both a lubricant, facilitating knowledge dissemination, and a glue, embedding sustainability into daily routines. The study advances understanding of sustainability knowledge at the organisational level and provides practical insights for fostering a culture of sustainability in hotel operations.

Keywords: Sustainability knowledge; Temporal knowledge; Hotel employees; Sustainable practices; Knowledge dissemination

3.1 Introduction

Through excessive resource consumption and waste generation, hotels exert a considerable environmental impact. Integrating sustainability into hotel operations has therefore become increasingly important, not only to minimise negative environmental effects but also to enhance operational efficiency and overall performance. Yet, as Juvan et al (2014) explains a persistent gap often exists between sustainability awareness and behavioural change. This attitude–behaviour gap, widely observed among tourists, similarly applies to organisational contexts where employees may know about sustainability but struggle to translate that knowledge into consistent action. Recent studies highlight the need to adopt green and sustainable practices such as energy efficiency, water conservation, and waste management to improve environmental quality (Prakash et al., 2023). Similarly, from a stakeholder perspective, implementing green initiatives positively influences hotels’ environmental, economic, and social performance (Khalil et al., 2024).

Hotel employees’ knowledge about sustainability is a critical factor in advancing sustainability outcomes (Zaragoza-Sáez et al., 2023). Knowledge directly influences employees’ practices, decision-making, and the implementation of environmentally responsible operations (Khalil et al., 2024). Knowledge is also directly linked to eco-friendly attitudes and behaviours that promote environmental sustainability amongst employees (Chua et al, 2022). Conversely, a lack of knowledge about sustainability is shown to hinder the successful implementation of green programs (Khatter, 2023). Yet, extant research focuses on basic knowledge about sustainability rather than addressing the multiple theoretical dimensions of sustainability knowledge (Raza et al, 2022).

Kaiser and Fuhrer (2003) identify knowledge as a multi-dimensional construct consisting of declarative knowledge (knowing what); procedural knowledge (knowing how); effectiveness knowledge (knowing why); and social knowledge (knowing the shared values, interpersonal dynamics, and organisational culture). The knowledge framework proposed by Kaiser and Fuhrer (2003) has been principally applied in consumer and individual behaviour contexts (He et al., 2022), but has clear potential for application in organisational settings such as hospitality. It extends conventional

boundaries of knowledge management by integrating sustainability concerns directly into decision-making and operational processes, thus distinguishing it from more traditional models that separate these domains (Khalil et al., 2024). Empirical applications of sustainability knowledge have been evident in diverse settings, including corporate governance and human resource practices, where its principles have been used to drive sustainable performance and strategic renewal in organisations (Martínez-Martínez et al., 2023). Kaiser and Fuhrer (2003) underscore the importance of adapting knowledge management to foster sustainable practices, making it a relevant lens through which to analyse the tourism sector (Alipour et al., 2019).

In this paper, we investigate the extent to which different types of knowledge, as introduced by Kaiser and Fuhrer (2003), exist among managers and employees in the hotel sector, and the role they play in engendering sustainable behaviours. Through qualitative inquiry, including interviews with thirty-five employees across various positions in the UK hotel sector, we identify how sustainability knowledge influences employees' sustainable behaviours and highlight notable problems with the overall dissemination of knowledge across organisational levels. In particular, we theorise a fifth temporal dimension of sustainability knowledge when raising this theory from the individual to the organisational level. This temporal dimension refers to “knowing when”. *When to share* the other types of sustainability knowledge acts as an organisational lubricant for the broader dissemination of other types of sustainability knowledge across organisational levels, whereas *when to act* on sustainability knowledge acts more like an organisational glue, connecting the other types of sustainability knowledge across departments and hierarchical levels, to ensure they are embedded in everyday practice. The findings contribute to our understanding of how hotels can cultivate sustainability knowledge within their workforce, fostering a more sustainable operational model that benefits both the environment and the business.

3.2 Literature Review

The tourism sector has increasingly recognised the significance of environmental protection activities (Dolnicar, 2020). Hotels have a direct and indirect impact on the environment due to their high consumption of natural resources, energy, and water

(Nimri et al., 2020). To mitigate these adverse effects, some hotels are adopting more sustainable operations which prioritise pro-environmental practices, including energy conservation, water reduction, and waste minimisation (Alreahi et al., 2022). Adopting sustainable practices allows hotels to differentiate themselves in the market, improve their image, build stronger relationships with stakeholders (Chung, 2020), and appeal to environmentally-conscious consumers (Chua et al., 2023).

While financial savings are a major driver for adopting sustainable practices, government incentives such as tax reductions and grants also play a crucial role (Abdou et al., 2020). Furthermore, sustainability marketing strategies allow hotels to differentiate themselves in the market, improve their image, and building stronger relationships with stakeholders (Chua et al, 2022; Nimri et al., 2020), and enhancing the hotels' competitive positioning by appealing to environmentally-conscious consumers (Chua et al, 2022). The effective implementation of sustainability practices in the hotel industry necessitates the active engagement of employees across all organisational levels (Mo et al., 2022; Demeter et al., 2023).

However, much of the existing research on sustainability in the hotel industry focuses on managerial perspectives, neglecting the insights and experiences of frontline employees (Mittal et al, 2016). Alipour et al. (2019) argue that employees are critical stakeholders in sustainability efforts, yet their knowledge and expertise are frequently overlooked during the development of sustainability strategies. This gap can lead to a lack of buy-in from employees, who may feel undervalued and less motivated to engage in sustainability initiatives.

Enhancing hotel employees' knowledge and understanding is crucial for the effective delivery of programs addressing environmental issues (Pham et al., 2020). With enhanced knowledge, employees are better equipped to make informed judgments and implement strategies that contribute effectively to tackling environmental challenges (Prakash et al., 2023). This focus on knowledge empowers employees to actively engage with and drive the success of environmental initiatives within the program. Consequently, developing sustainability knowledge across all employee levels creates

a feedback loop where increased employee engagement in sustainability practices informs better management decisions, enhancing customer satisfaction and loyalty (Bordian et al, 2021). The application of sustainability knowledge within the hotel industry represents an innovation in understanding how organisations can effectively integrate sustainability practices into their operational frameworks.

3.2.1 Sustainability Knowledge in Organisations

Sustainability knowledge focuses on types of knowledge that play a significant role in driving ecological behaviour (Zhang et al, 2020). Typically studied in relation to individual behaviours (Liu et al, 2021; Frisk et al, 2011), integrating sustainability knowledge into the study of organisations allows exploration of how knowledge is conceptualised, communicated, and adopted across an organisation (Broccardo et al., 2025), and how it can be harnessed to promote collective actions towards sustainability goals (Serrat, 2017) This knowledge impacts and influences behaviours at all organisational levels (Zhu et al., 2021), with the accumulation and dissemination of sustainability knowledge enabling informed decision-making (Centobelli et al., 2020). Although the literature has championed the incorporation of sustainability knowledge into organisational studies, the field remains nascent, focusing operationally on employees' roles without adequately examining how knowledge functions as a central mechanism for advancing sustainability. This reflects a broader pattern in tourism knowledge research, where studies highlight how the creation, transfer, and use of knowledge depend on timing, networks, and governance structures (Cooper, 2006; Xiao et al, 2007). These authors emphasise that knowledge rarely flows evenly across organisational levels, which supports the need to explore how sustainability knowledge is disseminated within hotels. By incorporating sustainability knowledge into organisational studies, we can better explore the mechanisms that influence employees' engagement with sustainability practices and the barriers to the implementation of sustainability strategies (Benn et al., 2014).

Kaiser and Fuhrer (2003) theorised a framework of sustainability knowledge, which includes declarative knowledge, procedural knowledge, effectiveness knowledge, and social knowledge. These dimensions provide a nuanced understanding of the various

facets of sustainability knowledge; each type and its applicability to organisations is explained below.

3.2.2 Declarative knowledge

Declarative knowledge, also known as "knowing what," refers to factual information stored in memory, often referred to as declarative memory (Ten Berge et al., 1999; Anderson, 1976). Kaiser and Fuhrer (2003) define declarative knowledge as vital information that influences an individual's understanding of complex systems and processes, particularly within the environmental domain. This foundational understanding of declarative knowledge is essential for informing decision-making and operational behaviours in various contexts, such as energy conservation, waste management, water usage, procurement of sustainable materials, and staff training on eco-friendly practices. This assertion is supported by Schahn and Holzer (1990), who emphasise that declarative knowledge is necessary for individuals to engage with and address intricate environmental issues effectively. In the context of sustainability, declarative knowledge encompasses an awareness of core principles, terminologies, and objectives related to sustainable practices (Alipour et al., 2019).

For instance, employees with robust declarative knowledge would have a clear understanding of the concept of recycling, its environmental significance, and its role within broader sustainability goals (Han et al., 2018). The extant research highlights the educational value of declarative knowledge, demonstrating that its enhancement through targeted interventions can significantly improve individuals' comprehension of complex environmental problems and their capacity to contribute meaningfully to sustainability practices (Geiger et al., 2019). However, despite the advantages associated with possessing declarative knowledge, it is important to recognise its limitations in predicting sustainable behaviour. Kaiser and Fuhrer (2003) maintain that while declarative knowledge provides essential information and reduces uncertainty, actual behaviours are shaped by numerous factors, including personal values, social norms, and external constraints. This complexity suggests that simply conveying knowledge is insufficient for promoting sustainable actions; instead, a more

comprehensive approach that incorporates other dimensions influencing behaviour is required (Ten Berge and Van Hezewijk, 1999).

3.2.3 Procedural knowledge

Procedural knowledge refers to “knowing how” to do something and includes procedures, methods, techniques and strategies that are used to perform specific tasks or accomplish specific goals (Star, 2005). Procedural knowledge offers practical instructions and behavioural alternatives, enabling individuals, not only to change their actions, but also to adopt new behaviours as necessary (Yan et al., 2020). Acquiring procedural knowledge typically involves hands-on experience, practice, repetition and feedback (Kaiser and Fuhrer, 2003), and can be difficult to articulate or convey to others (Yan et al., 2020; Kyriakopoulos, 2011). Procedural knowledge is an important aspect of human learning and intelligence, as it enables individuals to perform complex tasks and solve problems in a variety of contexts (Alipour et al., 2019).

Aguinis (2009) proposes that deliberate practices, for example, targeted training to improve specific skills, abilities, and capabilities, enhance employees' procedural knowledge, which subsequently influences their motivation and performance. For example, Matsuo and Kusumi (2002) found that procedural knowledge plays a crucial role in shaping employees' behaviour towards customers, making procedural knowledge vital for motivating employees to exhibit better behaviour and performance.

3.2.4 Effectiveness knowledge

Effectiveness knowledge, also known as “knowing why,” is a type of knowledge that influences behaviours through individuals' perceptions of how their actions impact the environment (Kaiser and Fuhrer, 2003). Effectiveness knowledge provides individuals with an understanding of the underlying reasons and motivations for engaging in environmentally responsible behaviours (Kaiser and Fuhrer, 2003). Unlike general awareness or technical knowledge, effective knowledge connects individual actions to broader environmental and social outcomes, thereby fostering a deeper personal engagement with sustainability initiatives (Ho et al, 2019). Recent research

emphasises that individuals are more likely to adopt sustainable behaviours when they comprehend not only what to do but also why their actions matter (Geiger et al., 2019). This form of knowledge strengthens intrinsic motivation, supports value-based decision-making, and promotes consistency between environmental attitudes and behaviours (Otto et al., 2014). Thus, integrating effectiveness knowledge into sustainability initiatives is essential for cultivating informed, motivated, and resilient pro-environmental behaviour at both individual and organisational levels (Geiger et al., 2019). In turn, this can improve the overall success of organisational sustainability programmes, reduce operational costs through more efficient resource use, and enhance the organisation's public reputation and social license to operate.

3.2.5 Social Knowledge

Social knowledge refers to identifying and interpreting social norms, values, and collective beliefs (Wan et al, 2022). When employees align with their organisation's collective environmental values, they are more likely to engage in pro-environmental actions and support sustainability initiatives (Kim et al., 2019). Organisational culture, which embodies these shared beliefs and values, creates a supportive environment that facilitates the integration of eco-friendly practices into daily operations (Paillé et al., 2014; Robertson et al, 2017). Leveraging social knowledge is therefore essential for organisations seeking to cultivate a culture of sustainability and achieve long-term environmental outcomes (Fawehinmi et al., 2020). Kaiser and Fuhrer (2003) further propose that social knowledge encompasses both conventional norms, such as customs and expectations linked to social approval, and moral norms, which stem from personal values related to fairness, human welfare, and environmental responsibility. Understanding these norms, what colleagues do, and what they perceive the organisation to value, shapes employees' willingness to engage in environmentally responsible practices (Fawehinmi et al., 2020).

Sustainable hotel literature has clearly identified the importance of employees in the success of sustainability initiatives and the importance of knowledge across the organisation. However, no research has examined the multi-dimensional nature of sustainability knowledge in this context, and its consideration within organisational

studies remains limited (Martínez-Martínez et al., 2023). The objective of this research is, therefore, to explore how the dissemination and application of sustainability knowledge within hotel organisations influence sustainability practices, with particular emphasis on understanding the role of knowledge as a central mechanism in advancing organisational sustainability.

The sustainable hotel literature has clearly identified both the importance of employees in the success of sustainability initiatives and the importance of strong levels of knowledge across the entire organisation. However, to date no research has examined the multi-dimensional nature of sustainability knowledge in this context, and its consideration within the organisational literature more broadly remains nascent. The main objective of this research is, therefore, to explore how the dissemination and application of sustainability knowledge within hotel organisations influence sustainability practices, with particular emphasis on understanding knowledge as a central mechanism in advancing organisational sustainability.

3.3 Methodology

This study adopts an inductive, qualitative approach to explore how the dissemination and application of sustainability knowledge across hotel organisations impacts operational practices. A qualitative approach enables an in-depth investigation into the subjective experiences of employees actively engaging in sustainability practices, allowing rich, context-specific insights to emerge (Creswell et al, 2016). This approach is particularly suited for examining the complexities of knowledge transfer and utilisation in dynamic environments such as the hospitality sector (Gioia et al., 2013). This constructivist perspective is critical in sustainability knowledge as individuals actively interpret and construct their own realities within organisational settings (Weick, 1995). An inductive logic guides the study, prioritising the development of theoretical insights grounded in the data due to the lack of extant studies on the multi-dimensional construct of sustainable knowledge in organisational contexts (Azungah, 2018). Semi-structured interviews were conducted to gather detailed narratives, and thematic analysis was used to identify patterns and connections between individual knowledge practices and organisational sustainability outcomes (Braun et al, 2006).

This approach allows for a nuanced understanding of how sustainability knowledge is mobilised within hotel operations and how it contributes to the organisation's broader sustainability efforts.

3.3.1 Data collection

This research utilised semi-structured interviews with a diverse group of hotel employees and managers across the UK. A total of 35 individuals working in hotels, which made explicit public commitments to sustainability, participated, as outlined in Table 4. The selection criteria ensured that interviewees were representative of all organisational levels and departments, including directors, general managers, department heads, and operational staff. This diverse group of interviewees included full-time, part-time, and seasonal employees. Organisational knowledge and sustainability engagement can vary significantly depending on employees' roles, responsibilities, and access to information (Nonaka et al., 1996). By involving participants from multiple levels and departments, the research sought to uncover the interconnectedness of individual knowledge, practices and broader organisational sustainability outcomes, aligning with the recommendation that rich, multi-perspective data is necessary for understanding complex organisational phenomena (Patton, 2014).

Participants were selected using purposive sampling through professional networks, guided by the research questions (Byrne, 2004) after the approval of the ethics committee. During the interviews, participants were asked about their understanding of sustainability to gain insight into their mental models and perceptions of sustainable practices. The interview process itself provided real-time evidence of their evolving sustainability knowledge. Participants were given the choice of in-person or Zoom interviews based on their convenience, with interview durations ranging from 45 to 120 minutes. The use of virtual platforms enhanced accessibility and flexibility, minimising logistical challenges in coordinating interviews across different locations (Bryman, 2016). Privacy and confidentiality were strictly maintained through individual interview sessions, and all recordings were securely deleted following transcription.

Table 4: Participant Overview

Participant Details (Anonymised)	Position	Hotel Classification	Green hotel certificate
P1	Hotel Supervisor	Independent	No
P2	HR Manager	Independent	Yes
P3	SGD Manager	Chain	Yes
P4	Operation Manager	Independent	Yes
P5	General Manager	Chain	Yes
P6	Housekeeper	Independent	Yes
P7	Head Chef	Independent	Yes
P8	Maintenance Staff	Chain	Yes
P9	Event Manager	Independent	No
P10	Hotel Manager	Chain	Yes
P11	Front Office Staff	Chain	Yes
P12	Operation Manager	Independent	No
P13	Housekeeper	Chain	Yes
P14	Hotel Owner	Independent	No
P15	Food & Beverage Manager	Independent	No
P16	Regional Director of Sales	Chain	Yes
P17	General Manager	Chain	Yes
P18	Food & Beverage Crew	Chain	Yes
P19	Front Office	Chain	Yes
P20	Kitchen Crew	Independent	Yes
P21	Training Manager	Independent	No
P22	Housekeeper	Chain	Yes
P23	Housekeeper	Chain	Yes
P24	General Manager	Chain	Yes
P25	Bar	Independent	No
P26	Housekeeper	Chain	Yes
P27	Hotel Owner	Independent	Yes
P28	Spa Manager	Independent	Yes
P29	Hotel Owner	Independent	No
P30	Commercial Director	Independent	No
P31	Trainee	Independent	Yes
P32	Housekeeper	Independent	Yes
P 33	Front Office Staff	Independent	Yes
P 34	Room Division Manager	Independent	Yes
P35	Breakfast Manager	Independent	Yes

Note 1: The names of the participants and hotels are not mentioned to ensure confidentiality and protect participant privacy in accordance with ethical guidelines.

3.3.2 Data Analysis

The analysis followed an abductive approach. It began with inductive coding and progressed through iterative engagement with theoretical frameworks. After transcription, data were systematically coded to identify recurring patterns and meanings grounded in participants' experiences (McGinley et al., 2021). By analysing

emerging themes and patterns after data collection, we identified connections between our findings and different types of sustainability knowledge. This approach ensured that the findings were grounded in the participants' experiences and accurately reflected sustainability knowledge present within the hotel industry (Bell et al, 2014). Subsequently, the data were systematically coded, allowing for the identification of meaningful patterns that provided insights into how hotel employees acquire sustainable knowledge through their operational activities. The emergent themes, along with the relationships between them, were refined, defined, and named through a rigorous process of formal analytical writing and cross-checking against the dataset, coded extracts and the extant literature (Braun et al, 2022).

The Gioia methodology (Gioia et al., 2013) was adopted to structure the analysis, ensuring that the participants' perspectives were preserved throughout the process. This methodology is particularly effective for exploring knowledge-related phenomena, as it facilitates the categorisation of detailed, context-specific insights into broader themes (Gioia et al., 2013). Following the identification of initial themes, the research team collaboratively refined and grouped these into broader categories that encapsulated the essence of the data. Relationships between themes were analysed to develop a nuanced understanding of how sustainability knowledge manifests across different roles and organisational contexts. NVivo software was used to organise and visualise the data, enhancing the rigour and transparency of the analytical process.

To ensure the reliability and validity of the findings, multiple rounds of discussion and iterative analysis were conducted within the research team (Xiao and Smith, 2007). The final themes were contextualised within the existing literature on sustainability knowledge, providing a framework for understanding the role and evolution of sustainability knowledge in the industry.

3.4 Findings

The findings highlight the various ways in which sustainability knowledge is developed, extracted and enacted in daily hotel operations. Although the sample included employees from both chain and independent hotels, no significant differences

were observed in how sustainability was understood or enacted across these organisational contexts. The findings therefore focus on shared patterns across hotel types.

At an individual level, employees actively engage with sustainable practices, shaping their interpretation and implementation based on prior knowledge (Alipour et al., 2019). Simultaneously, management adopts a strategic approach, aligning sustainable initiatives with the hotel's broader mission and goals, thereby fostering a culture of sustainability throughout the organisation (Sahoo et al., 2023). As one general manager noted: *“Achieving sustainability in organisations requires the active participation of individuals at all levels, as meaningful change is driven not only by strategy but by everyday actions.”* (P5, General manager).

Data collection revealed that managers and employees continuously learn from one another, collaboratively supporting sustainability efforts. These dynamic interactions underscore the role of the hotel as a key organisational space where sustainability is not only implemented but also actively cultivated through shared learning and practice.

3.4.1 Sustainability knowledge among hotel employees

The analysis highlights that sustainability knowledge is recognised by hotel employees as fundamentally important not only for environmental stewardship but also for improving operational efficiency. This knowledge is shaped through both institutional mechanisms (such as frameworks and workshops) and interpersonal knowledge-sharing, as evidenced by P3 (SGD Manager): *“As part of a hotel chain, we follow the sustainability framework provided by our head office. I have participated in Education for Sustainable Development (ESD) workshops and recognise how crucial these practices are, not only for protecting the environment but also for reducing operational costs. I shared it with staff to discuss our sustainability plans and encourage their input and participation.”*

This shared responsibility and communication among all staff is highlighted further by P27 (Hotel Owner): *“Every employee plays a crucial role in the hotel's operations,*

especially in sustainability. If one person doesn't have enough knowledge about sustainability, it can have a ripple effect, and critical issues can be overlooked."

While knowledge sharing is accepted as necessary, inconsistencies in the transfer of sustainability knowledge were evident, particularly at the operational level, for example, P19 (Front Office Staff) claims: *"To be honest, I don't really know what counts as sustainability in our job. We just follow our routine, I always thought sustainability was more for the kitchen."* This perception reflects a fragmented understanding of sustainability, where front-facing roles see their duties as administrative or guest-oriented rather than environmentally impactful. It also suggests a gap in internal communication or organisational learning, where sustainability is not framed as a shared value embedded across departments. As such, employees outside the operational core may not be engaged in or feel ownership over the hotel's environmental goals. This is reflected by P22 (Housekeeper), who talks of the importance of sustainability in her home life: *"Sustainability is very important to me...I've been more mindful of my actions...when I'm working in the hotel, I make sure to separate the waste properly. It's a shame that no one at the hotel has told me this or encouraged it; I've had to figure it out on my own."* Despite the hotel having a formal sustainability policy, knowledge about this policy and the practices expected of operational employees is not being effectively communicated. This demonstrates that whilst managers often emphasise the importance of sustainability initiatives and the need for sustainability knowledge across the organisation, operational employees often lack the foundational understanding required to meaningfully engage with sustainability-related knowledge and apply it in their roles. Even when individual employees are willing to engage in sustainable practices, the presence or absence of organisational systems for transferring sustainability knowledge fundamentally shapes their ability to do so. This lack of sustainability knowledge at the operational level can hinder the effective execution of sustainability initiatives (Alipour et al., 2019).

Given these disparities, a better understanding of the types of sustainability knowledge in organisations and how they are leveraged becomes important. The following

sections explore each of the types of sustainability knowledge in turn, followed by our identification of a fifth type of knowledge needed when elevating sustainability knowledge from the individual to the organisational level.

3.4.1.1 Declarative knowledge

Declarative knowledge refers to the explicit understanding of facts, concepts, and information, often characterised as “knowing what”. It represents the foundational knowledge required to comprehend specific topics or phenomena (Kaiser and Fuhrer, 2003). However, at the employee and managerial levels, there appears to be a notable variation in the depth of this declarative sustainability knowledge. At senior management levels, knowledge about sustainability tends to be broader and more forward-looking, focusing on integrating environmental priorities with the hotel’s future goals and strategic vision. *“These days, a good manager really needs to understand the impact of things like energy use, waste, and carbon emissions. It’s not just about running a traditional hotel anymore, it’s about being aware of what we’re doing to the environment and making better choices every day for the hotel to practice more sustainability in the long term.”* (P30, Commercial Director). *“I’m aware of the environmental regulations and certifications we’re supposed to comply with. Understanding these requirements helps us set proper targets and guide the team accordingly.”* (P3, SGD Manager). These quotes show an understanding not only of specific sustainability concepts but also of their practical implications for daily hotel operations. This perspective highlights how factual knowledge is foundational to recognising the environmental responsibilities embedded in contemporary hospitality management. Such comprehension empowers managers to establish clear directions and ensure that operational strategies support broader ecological commitments. It also equips them to motivate staff through informed guidance and structured planning.

While managers often possess a reasonably comprehensive understanding of sustainability goals, the depth of declarative knowledge among frontline employees varies considerably, with some expressing uncertainty about key concepts and the relevance of sustainability practices to their daily work. *“I know the hotel has a sustainability certificate called [name hidden], but I don’t really understand it.”* (P6,

Housekeeper). *“Whenever our guests ask about the sustainability stuff, I just call my manager because I’m not really sure how to respond. We haven’t had much training on that, and I don’t want to give the wrong information”*. (P33, Front Office Staff). The quote from a front office employee highlights a significant knowledge gap in sustainability within hotel operations, reflecting not only a lack of formal training but also a lack of empowerment to engage with guests on sustainability-related topics. In other cases, operational staff receive only limited or fragmented information about sustainability, which can hinder their understanding and sense of involvement. Factors such as varying levels of training or limited opportunities for cross-functional dialogue can contribute to discrepancies in how sustainability knowledge is shared and internalised. As a result, while some employees may feel directly connected to, and proud of, sustainability efforts, others may be left with only vague awareness or uncertainty about what these initiatives mean in practice.

These examples indicate a gap in declarative knowledge about how broader environmental responsibilities extend beyond immediate resource concerns. This suggests that current training or discussion about these matters does not adequately address employees’ perspectives or explain why sustainability matters in their specific context. In turn, this demonstrates how unclear role definitions and limited organisational support can prevent staff from contributing to the hotel’s broader sustainability goals, reflecting a broader challenge in the industry; unless sustainability knowledge is distributed across departments and employees are actively included in its implementation, efforts toward environmental responsibility may remain superficial or uneven in practice.

The findings reveal a distinct disparity in declarative knowledge across organisational levels. At the senior management level, such knowledge tends to be strategic, comprehensive, and aligned with long-term sustainability goals (Martínez-Martínez et al., 2019). In contrast, operational employees often demonstrate more variable and, at times, limited understanding of declarative principles. This inconsistency can hinder the coherent and effective implementation of sustainability practices across the organisation (Jackson et al., 2011). Bridging this gap in declarative knowledge remains

a critical challenge for fostering alignment, ownership, and long-term engagement in organisational sustainability efforts.

3.4.1.2 Procedural knowledge

Procedural Knowledge refers to “knowing how” to do something (Kaiser and Fuhrer, 2003), and it involves understanding the processes, techniques, or actions required to accomplish specific tasks. This type of knowledge empowers employees to carry out sustainability initiatives effectively, applying the concepts they have learned in practice. Our analysis reveals several instances where employees, both managerial and operational, demonstrated a clear grasp of procedural knowledge. For example, P17 (General Manager) comments: *“Knowing how to implement the sustainable practices into daily routines allows our staff to contribute and ensures that sustainability becomes a main part of our operations.”* This perspective emphasises the importance of equipping staff with the necessary tools and training to seamlessly integrate sustainability into their responsibilities, rather than adding burden. Similarly, P29 (Hotel Owner) explains how demonstrating small, actionable steps can make a substantial difference: *“Making sure staff know how to implement simple changes, like reducing food waste or switching to reusable items, I show them with examples that helps us achieve our sustainability goals without adding extra work and of course reducing our operational costs.”*

When procedural knowledge is well-communicated and supported, employees are more likely to engage with and maintain sustainable habits. Even at the operational level, employees displayed initiative in adopting sustainable behaviours. P26 (Housekeeper) shared the following experience: *“I recently came across a video, on YouTube I think, that suggested not leaving the water running while cleaning, and I realised it helps in more ways than one. It saves water, makes the task easier, and keeps me from getting too sweaty, so my uniform stays dry. I mentioned it to my manager, and she also asked the rest of the team to consider it.”* This illustrates how procedural knowledge can emerge informally or through peer learning, underscoring the importance of fostering a proactive and supportive work environment. However, despite these positive instances, the data also reveals a noticeable gap in procedural

knowledge among some employees. Several participants acknowledged the importance of sustainability but expressed uncertainty about how to implement it in their specific roles. For example, P22 (Housekeeper) notes: *“I understand that sustainability is important, but I’m not sure how to use eco-friendly products properly or where to find them. I feel a bit lost when it comes to making those changes in my daily tasks.”* This contrast, even within the same role, points to inconsistent training and the need for more explicit operational guidance. Similarly, a front office employee shared: *“I don’t really understand how to be more sustainable in the front office, especially since we don’t deal with food waste. It feels like sustainability is more about things like recycling or reducing waste, but I’m not sure how to apply it in my role here.”* (P11, Front Office Staff). This highlights a common misconception that sustainability practices are only relevant to particular departments, which further limits widespread adoption.

A notable finding that emerges is that managers are particularly lacking procedural knowledge, despite their higher levels of declarative knowledge, as identified in the previous section. One commercial director reflected: *“I come from a leadership background in the car industry and recently joined the hotel sector. I’m familiar with SDGs and other sustainability concepts, but I’m not sure how to apply them specifically for example for cleaning rooms in a more sustainable way. The housekeeping staff might know, but I’m not sure.”* (P30, Commercial Director).

This illustrates that even those with strong declarative knowledge may struggle to apply sustainability principles in unfamiliar operational contexts. The lack of tailored, role-specific guidance limits their ability to lead effectively in sustainability efforts, as noted by P2 (HR Manager): *“We haven’t yet put a proper system in place for tracking or training staff on sustainability. We rely on common sense and expect department heads to cover it informally.”* However, this quote reveals a significant gap in procedural knowledge at the HR level regarding sustainability. The HR Manager recognises the importance of sustainability but lacks a structured approach to embedding it within core human resource functions, such as recruitment, onboarding, continuous training, and performance appraisals. Further gaps emerge,

for example, P1 (Hotel Supervisor) notes: *“The owner of this hotel never really cares or understands how things are practised operationally. Whenever I bring up sustainability, his response is usually, ‘So what? Will it bring in more guests or not?’ There’s no interest in setting up any procedures unless there’s an immediate financial return.”* This strategic and procedural gap at the ownership level reveals that sustainability is often viewed through a short-term profit-driven lens, with the owner's dismissal of sustainability concerns unless directly tied to guest numbers reflecting a lack of commitment to long-term organisational practices that embed sustainability into daily operations.

In summary, while some hotel employees demonstrate a strong understanding of how to integrate sustainable practices into their daily work, many lack the procedural knowledge needed to do so confidently. This gap is particularly pronounced when employees transition from other industries or work in roles where the applications of sustainability are less noticeable. To address this, hotels must implement targeted training programs that translate sustainability goals into practical actions across all departments. By doing so, they can foster a culture where sustainability becomes embedded in both thought and practice, ensuring a more unified and effective approach throughout the organisation.

3.4.1.3 Effectiveness knowledge

This type of knowledge refers to why specific actions or practices work and how they contribute to achieving specific goals (Kaiser and Fuhrer, 2003). In the context of sustainability, effectiveness knowledge is crucial for both employees and managers, as it enables them to grasp the broader impact of sustainability initiatives and apply this understanding to their daily tasks. Managers often possess a strategic view of sustainability, as they are responsible for aligning these practices with the organisation's broader objectives. Their knowledge is typically more comprehensive, encompassing an understanding of how sustainability contributes to long-term goals. P27 (Hotel Owner) gives an example of this: *“After we implemented water-saving fixtures in the bathrooms, we tracked our water usage and realised that we saved thousands of litres per month. This not only helps the environment but also reduces*

our operating costs.” The manager goes on to emphasise the importance of sharing these successes with the staff, reinforcing the value of sustainable practices and encouraging ongoing engagement. It shows that sustainability initiatives, when effectively communicated and measured, can have tangible benefits for both the environment and the hotel's bottom line. A similar example is given by P7 (Head Chef): *“We noticed a significant drop in plastic usage when we switched to biodegradable straws and bottles, my staff can't believe it. Our guests love it, and the cost difference is minimal, but the positive impact on the environment is huge.”*

Seeing the effectiveness of sustainability practices is also experienced positively by operational employees: *“Our hotel is being refurbished, and during a recent meeting the management introduced a new energy-saving strategy. My line manager showed us a flow chart mapping out all the lightbulbs in the hotel, explaining that they are important for maintaining the hotel's ambiance and appearance. I was instructed to replace them with LED bulbs, which will be connected to sensors. We expect to start seeing the energy-saving results of this change next month.”* (P8, Maintenance Staff) *“Before the training, I didn't really understand why reducing plastic waste was so important. I knew we were supposed to cut down on it, but I didn't realise the full environmental impact or how it contributes to pollution. It wasn't clear to me why it mattered.”* (P18, F&B Crew). These examples show that without effectiveness knowledge, sustainability practices may appear disconnected from their intended outcomes.

However, not all operational employees were able to engage with effectiveness knowledge in the same way: *“The guests are paying money to enjoy their time at the hotel, and we are just their maids. My manager wants his manager to say ‘well done’ to him, but to me, there doesn't seem to be much point in focusing on sustainability in the hotel.”* (P26, Housekeeper). *“Ten years ago we provided everything to the guest, even slippers. But they tell us to remove the amenities items from the hotel room for sustainability, but don't know why; guests may need that. It seems the hotel is cheap.”* (P6, Housekeeper). These examples highlight a lack of knowledge about effectiveness, as the staff don't understand the environmental reasons for reducing amenities, waste

reduction, or resource conservation. Without understanding the environmental impact or the long-term benefits of sustainability (e.g., cost savings, reputation building, resource conservation), these employees may feel that it is irrelevant to their work. This gap in “knowing why” reflects the need for a deeper explanation of the broader purpose and value of sustainability practices within the hotel.

The findings reveal that effectiveness knowledge plays a crucial role in shaping employees' understanding of the impact of sustainable practices in the hotel industry. When hotel managers and employees have a clear understanding of the tangible benefits of sustainability, such as reduced operational costs or positive guest feedback, they are more likely to engage in these initiatives (Acosta-Prado et al., 2020). The gap in perception regarding the effectiveness of sustainability initiatives highlights a significant challenge for hotels aiming to implement sustainable practices successfully. When employees fail to see the direct connection between their actions and broader sustainability goals, it can result in disengagement and a lack of motivation (Abdou et al., 2020). This disconnection not only undermines the success of sustainability programs but also diminishes the potential impact that each employee can make.

3.4.1.4 Social knowledge

Social knowledge, as outlined by Kaiser and Fuhrer (2003), captures how sustainability is understood and enacted through shared values, interpersonal dynamics, and organisational culture. This type of knowledge influences how individuals perceive their roles in collective environmental action. Within hotels, social knowledge emerged strongly through leadership practices, team relationships, and informal communication channels. Managers often emphasised the importance of fostering a socially inclusive environment to strengthen sustainability efforts. One hotel owner connected sustainability with the broader principles of equality, diversity, and inclusion (EDI): *“As the hotel owner, I believe that EDI (Equality, Diversity, and Inclusion) are fundamental to sustainability. I ensure that bringing in people from different backgrounds and races. I always make it a point to listen to my team, and I maintain an open-door policy in my office so they know they have a safe space to share*

their thoughts. They understand that I fully support sustainability initiatives at the hotel.” (P14, Hotel Owner).

Such leadership practices reflect findings from Hwang et al. (2021), who argue that a supportive social environment is critical for embedding sustainability into organisational behaviour. By modelling inclusivity and openness, managers create a climate where sustainability becomes a collective value rather than a top-down directive. Some managers further highlighted the need to reshape staff attitudes and beliefs: *“As the leader of the hotel, my main focus is on guiding my staff to shift their mindset and beliefs regarding sustainability and social responsibility. This mindset shift is the first step in our journey toward sustainable practices. Currently, we are working on developing a strong belief in sustainability, which will be the foundation for future plans in this matter.”* (P5, General Manager).

This aligns with Kaiser and Fuhrer (2003) assertion that social knowledge involves internalising *why* sustainability matters, which often requires changing social norms and values. Similarly, Chan et al. (2017) note that cultural shifts within hospitality teams can drive more enduring sustainability outcomes than policies alone. Employees and interns frequently discussed the role of informal, day-to-day interactions in shaping their understanding of sustainability. One intern explained: *“The hotel owner often joins for lunch and shares meals with us. She regularly asks about my experience working at the hotel and encourages me to reflect on how the hotel's sustainability practices compare to what we study at university. She actively listens and engages in thoughtful discussions on these topics. This has encouraged me to stay well-prepared so I can contribute meaningfully to our conversations.”* (P31, Trainee).

These reflective dialogues highlight how social learning occurs outside formal training settings, reinforcing findings by Billett (2020) that workplace knowledge is often co-constructed through mentorship, dialogue, and shared experiences. *“When the owner visits, she never stays in the management office. She comes straight to the front desk, greets guests with us, and talks to the team. She’s very open easy to approach and I’ve even learned things directly from her during those conversations.”* (P33, Front Office

Staff). The owner's informal yet active engagement with frontline staff illustrates an open communication culture where learning is not confined to formal training sessions or top-down directives. By choosing to spend time at the front desk rather than remaining in the management office, the owner creates spontaneous opportunities for knowledge exchange, mentorship, and observational learning. Staff feel empowered to ask questions or share experiences, and the owner's willingness to explain concepts or demonstrate practices in real-time fosters a sense of inclusion and continuous learning.

Such interactions can be especially impactful in promoting sustainability-related knowledge when leaders model values and behaviours aligned with sustainable hospitality practices. However, the data also revealed gaps in social knowledge when employees felt excluded or undervalued. For example, a kitchen crew member described a lack of belonging: *"I don't really feel a sense of belonging in this hotel. Management doesn't take the time to get to know us, and sometimes they even say that we won't be here for long. They never talk about sustainability, whenever we bring something up, they just say they're too busy."* (P20, Kitchen Crew)

Similarly, one housekeeper expressed disinterest due to a lack of recognition or reward: *"Haha! There's no social gathering in this hotel for us. Even during lunch, we sit separately from the management team. Whether I practice sustainability or not, my salary stays the same, so why should I bother?"* (P22, Housekeeper). These findings resonate with studies by Kim et al. (2019) and Lopez-Cabrales and Valle-Cabrera (2020), which suggest that employees' engagement in sustainability efforts depends on both relational trust and visible appreciation from management. Without these social reinforcements, sustainability risks being perceived as irrelevant or purely symbolic.

In some cases, employees observed managerial efforts but felt disconnected from the decision-making process: *"We see the managers involved in sustainability projects, but they don't really explain much. It feels like something they do for reporting, not something we're part of."* (P11, Front Desk Staff). This disconnect reflects what Kaiser

and Fuhrer (2003) describe as a breakdown in *shared meaning-making*, a key condition for effective social knowledge. When communication is one-sided or absent, sustainability fails to embed itself as a cultural norm.

Overall, these findings demonstrate that social knowledge is built through inclusive leadership, open dialogue, shared values, and opportunities for collaborative reflection. Where managers actively fostered social connections and aligned sustainability with shared values, employees reported stronger engagement. Promoting EDI and encouraging reflective dialogue empower staff at all levels to contribute meaningfully. In contrast, the absence of communication and recognition created disengagement and scepticism, with the disconnect experienced by some operational staff revealing significant gaps in social engagement, highlighting the need for intentional efforts to build trust, inclusion, and recognition. These dynamics support the view that social knowledge is essential for embedding sustainability into organisational culture, as both theory (Kaiser & Fuhrer, 2003) and prior research in hospitality (Chan et al., 2017; Kim et al., 2019) have emphasised.

Ultimately, social knowledge is not only essential for internal cohesion but also for aligning the hotel's operations with broader sustainability goals. When employees feel valued and part of a shared mission, they are more likely to invest in sustainable practices. Creating a socially supportive and communicative workplace enhances both organisational culture and external reputation, reinforcing sustainability as a fundamental business value (Yu et al., 2017).

3.4.1.5 A temporal dimension of sustainable knowledge: Integrating 'when'

In the previous four sections, we demonstrate the importance of moving beyond a focus on declarative type knowledge in the tourism literature (Chan et al., 2014, Okumus et al., 2019) to a more rounded, multi-dimensional view of sustainability knowledge, better able to engage employees at all hierarchical levels with sustainability initiatives. However, what is also demonstrated is that it is not the total accumulation of sustainability knowledge in an organisation that influences the outcomes of these initiatives, but the *overall dissemination* of this type of knowledge across the organisation. Understanding this, we uncover a new type of knowledge,

temporal knowledge, which appears essential when raising sustainability knowledge theory from the individual to the organisational level.

Temporal knowledge refers to individuals knowing *when* sustainability knowledge should be shared and acted upon. Timing plays a pivotal role in bridging the gap between awareness and action, ensuring that knowledge is relevant and impactful. Without attention to the right moment for communication and intervention, even the best knowledge may fail to influence behaviour or embed sustainability into the organisational culture. A lack of this temporal knowledge influences all four other types of knowledge, in terms of who they are disseminated to, or how they are brought into action in the workplace. It acts in two ways: (1) Knowing *when to share knowledge* acts like a lubricant to each of the other four types of knowledge, ensuring that knowledge is disseminated in a way which is absorbable and actionable. (2) Knowing when to enact knowledge acts more like a glue, combining the disparate accumulation of the other four types of knowledge across organisational levels to ensure they are embedded in everyday practice.

3.4.1.6 When to share knowledge

Time plays a significant role in the accumulation and strengthening of sustainability knowledge (Waqanimaravu et al, 2020). As individuals are gradually exposed to sustainability-related information across various contexts such as media, social discourse, or personal observation, they begin to build a mental framework of what sustainability entails. Over time, repeated encounters with these concepts enhance familiarity and cognitive reinforcement, leading to deeper retention and better recall (Waqanimaravu et al, 2020). However, hotels are typically very busy places, with the cognitive capacity to take on new information often at a premium. One hotel manager noted the importance of timing in sharing such knowledge with staff: *“I’ve found that before the peak season is the best time to discuss our energy-saving practices. for example, how switching off unused reduces costs and environment. Staff are present and not yet busy with guests, so it’s a good opportunity to introduce new plans.”* (P5, General Manager). This quote illustrates how sharing sustainability goals and

procedures at times of low operational pressure, such as before peak season, can increase their effectiveness.

Employees are more receptive and less distracted, allowing for greater engagement with the content and a higher likelihood of retention. Similarly, one hotel manager reinforces: *“I realised it’s not enough to just mention it [sustainability] once. You need to catch the right moment, like when we change the SOP or during a new campaign and then keep reinforcing it.”* (P3, SGD Manager). This insight underscores the significance of timing and repetition in effectively conveying sustainability messages.

Aligning such communication with operational shifts, such as updated procedures or new initiatives, enhances its relevance and impact. Continuous reinforcement ensures that sustainability is perceived, not as an add-on, but as an integral part of day-to-day operations. This was reflected in one housekeeper’s experience, where the right moment and context made the message truly resonate: *“In the beginning, I just followed the steps to turn off lights, reuse towels but it didn’t really mean much. It was during our quieter winter season, when we had more time to talk, that our supervisor explained how these actions actually help reduce waste and energy. That’s when it clicked for me. Now, I care more and even remind new staff why these things matter.”* (P32, Housekeeper).

This example illustrates how the timing of communication can transform routine tasks into meaningful actions. The quieter season provided space for reflection and dialogue, allowing the housekeeper to connect daily practices with broader sustainability outcomes. What began as procedural compliance evolved into internalised commitment, driven by a clearer understanding of purpose. This shift from “what to do” to “why it matters” is at the heart of effectiveness knowledge, where employees are not only informed but also inspired to champion sustainability within their roles. It highlights the importance of integrating sustainability conversations into the natural rhythms of hotel operations, particularly during periods when staff are more receptive.

If the *when to share knowledge* is misaligned it can have negligible effect, for example: “*I only remember having online training about sustainability before starting my job, but it didn’t help much because I wasn’t familiar with the hotel. I don’t think it was sufficient.*” (P20, Kitchen Crew). “*They only mention sustainability results during the annual meeting, and by then, no one remembers what we did. If they shared it right after a campaign or a change, it would stick better and help us improve.*” (P2, HR Manager). The first quote reflects a disconnect between what was taught and when it was delivered, and the importance of leaders knowing *when to share knowledge*. Providing information before the employee had any practical context limited its usefulness and impact. If the same knowledge had been shared after their initial experiences in the workplace, it might have been more relatable and actionable. In the second quote, delayed feedback can weaken the perceived value of sustainability initiatives among employees. Sharing outcomes too late reduces their motivational impact, as staff may no longer associate the feedback with their efforts. In contrast, timely sharing of success metrics such as how much waste was reduced or how many towels were reused (as in earlier quotes) can reinforce the desired behaviours, promote learning, and help embed sustainability practices into daily operations and culture.

The timing of knowledge dissemination influences its relevance, absorption, and application (Simkins et al, 2023; Al Koliby et al., 2022). Thus, the knowledge to pinpoint *when* an intervention is needed is a paramount concern when disseminating information, particularly declarative, procedural and effectiveness knowledge, with knowing *when to share knowledge* acting as a lubricant for the successful dissemination of the other forms of knowledge across the organisation.

3.4.1.7 When to enact knowledge

There is also a further consideration of *when to enact knowledge*, encompassing the optimal timing for employees to be able to incorporate sustainability actions into their day-to-day work routines. As identified in the earlier findings, leaders and managers typically have good declarative knowledge and decent effectiveness knowledge, but can be less connected to procedural knowledge, nor experience the employees’

perspectives on social knowledge. As such, *when to enact knowledge* is a collective form of knowledge based on shared experiences across roles and functions, which facilitates the effective and repeatable integration of sustainability practices. This form of temporal knowledge acts more like a glue, connecting the other four types of individual knowledge into shared knowledge to allow for repeatable, meaningful action.

The temporal dimension of sustainability knowledge also extends beyond recognising when sustainability practices should be enacted to include decisions about when knowledge should be communicated and how its timely use can support operational efficiency. In fast-paced hotel environments, employees often make real-time judgements about when sustainability practices are feasible without disrupting service delivery. For example, employees may decide when to communicate sustainability practices to guests, when to share sustainability-related knowledge with colleagues, or when to implement resource-saving practices during quieter operational periods. In this way, temporal knowledge can support both environmental goals and operational efficiency by enabling employees to integrate sustainability practices without increasing workload pressures. These behaviours can also be interpreted through the employee sustainability behaviour framework proposed by Ones and Dilchert (2013), which emphasises that environmental sustainability behaviours in organisations include both formally required and discretionary actions undertaken by employees. Within hotel settings, recognising when and how to apply sustainability knowledge represents an important behavioural dimension through which employees contribute to organisational sustainability outcomes.

Enacting sustainability practices often manifests through guidance and work routines for operational employees, but this doesn't always result in lasting outcomes: *"We used to have a system where we had to separate plastics, paper, and food waste after room cleaning, and it worked for a couple of weeks. But then one person started putting everything in the wrong bins, and the rest of us had to go back and fix it or just gave up because it made no difference. After a while, nobody followed it properly anymore because we just didn't have the time, and managers stopped checking. It kind of faded out, even though it sounded like a good idea at the start."* (P20, Kitchen Crew).

Multiple similar cases emerged across the data where sustainability protocols, such as waste segregation, or water and energy conservation protocols are introduced with good intentions but are not effectively embedded into the core routines, or under-supported by reinforcement structures, oversight or reward systems. In the above case, although a structured waste separation system was initially adopted, the lack of consistent monitoring and accountability, coupled with limited uptake by operational employees, meant that even minor non-compliance (e.g. mis-sorting waste) undermined the collective effort. Effectively the protocol did not integrate well with the existing routine, wasn't properly adhered to, and the motivation to maintain it lost in the face of competing priorities.

While sustainability may be promoted at a corporate or managerial level, frontline employees often lack both the declarative and procedural knowledge needed to put sustainability procedures into practice: *“We are always short-staffed. I don't have time to separate the rubbish when I clean the rooms. Some of the waste is really dirty and unhygienic, and some guests leave such a mess that I have to spend a lot of time just making the room ready again. I just focus on cleaning properly and moving on to the next room.”* (P32, Housekeeper).

Similarly, the absence of effectiveness knowledge (understanding why a routine is changed) and social knowledge (recognising sustainability as a cultural expectation) makes it difficult to translate organisational values into daily practices. Many staff described feeling that they had neither the time nor the necessary guidance to prioritise sustainability within their workload. This underscores the disconnect between sustainability goals and the design of operational functions, where efficiency often outweighs environmental considerations. It illustrates how sustainability becomes deprioritised in the face of immediate operational pressures if it is not embedded in employees' daily routines as fundamentally important. It also highlights the need for more practical, staff-informed strategies that consider workload, staffing, and the physical demands of roles, ensuring that employees have both the time and knowledge required to act on sustainability.

While employees can be trained on what sustainability is, how sustainable practices should be followed, and how to implement them, hotel employees often work under tight schedules, with little room for additional tasks. The answer to this lies in the routine integration of sustainability actions into regular tasks, so that employees can seamlessly implement them without feeling overwhelmed by their workload. As one hotel employee noted: *“I remember a day when I was writing urgent tasks on sticky notes for my colleague to handle after my shift in the front office. My manager noticed and showed me how to use Outlook to set reminders, even pointing out the icon I could use to notify my colleague about the importance of those tasks. She explained that even small steps like this can contribute to our goal of reducing paper waste and moving towards a paper-free environment.”* (P8, Maintenance Staff). This quote highlights the significance of real-time, practical guidance in developing the procedural knowledge to enact the sustainability goals of the organisation. The manager’s intervention provided not only an alternative method (procedural knowledge) but also linked that method to a sustainability objective (declarative knowledge), turning a routine administrative task into a learning moment for sustainable practice through combining the types of knowledge.

Another illustration of how different forms of knowledge combine to support sustainability came from the breakfast service team. One manager explained how food waste is reduced through real-time monitoring: *“We check how many people are still coming for breakfast, then I talk to the chef and say, look, we have 20 more people coming in, 30 sausages left, don’t cook anymore. It’s just communication. If I don’t tell the chef, they’ll keep cooking and we’ll waste food. So, every day it’s the same process, checking, talking, and adjusting. That way we save food and reduce waste.”* (P35, Breakfast Manager). This example demonstrates how declarative knowledge (knowing that food waste is important) was linked with procedural knowledge (the specific routine of counting and communicating with the kitchen) and effectiveness knowledge (knowing why action is needed to save resources and costs). The routine is reinforced socially within the team, with managers emphasising that reducing waste is both an operational necessity and part of the hotel’s sustainability culture. In this

way, a seemingly small task, counting portions and adjusting cooking, becomes an embedded sustainability practice that staff accept as meaningful to the organisation.

Knowing *when to enact sustainability knowledge* is a combination of managers clearly communicating what expectations are (declarative knowledge), employees sharing ideas on how to engage with new practices within the daily routine (procedural knowledge), both knowing why they are being done (effectiveness knowledge) to promote compliance, and having structures and cultures of support to ensure re-enforcement of the actions across the workforce (social knowledge). Only then can sustainability practices be widely disseminated and practised to make meaningful change.

3.5 Discussion

This research shifts the focus of sustainability knowledge from the consumer perspective, commonly emphasised in previous studies (Mohd Suki et al, 2015; Liu et al, 2021), to highlight the critical role of hotel employees' knowledge in the implementation and advancement of sustainability practices. Despite the importance of employee knowledge being widely articulated across organisational sustainability (Patton, 2015; Martínez-Martínez et al., 2023) and sustainable tourism literature (Chan et al., 2014; Knezevic et al., 2024; Khalil et al., 2024; Okumus et al., 2019), its exploration as a multi-dimensional, organisational construct is largely lacking (Benn et al., 2014, Barrantes-Briceno et al., 2024).

3.5.1 Theoretical Contribution

The findings reinforce the importance of all four types of sustainable knowledge, categorised by Kaiser and Fuhrer (2003), for engendering effective sustainability practices across operational staff and management. We demonstrate that while managers have good declarative knowledge, the most typically measured type of knowledge in extant literature (Chan et al., 2014; Okumus et al., 2019) and reasonable effectiveness knowledge, this does not directly translate into better sustainability practices if not disseminated effectively. Employees who don't understand what a sustainability policy is in place for or fail to understand why it is important (Geiger

et al., 2019), openly admit to being disinclined to make efforts to follow through with these policies.

Employees can have good procedural knowledge about the day-to-day tasks they perform (Matsuo et al, 2002) and many can envision procedural innovations that could improve sustainability outcomes (Aguinis et al, 2009). Nevertheless, a lack of understanding and support from managers who have a more limited understanding of the routines that employees go through, means operational employees are limited in time or have inadequate resources, to adopt more sustainable practices.

It is particularly notable that a lack of social knowledge creates problems in engaging employees in sustainability (Assoratgoon et al, 2023). Social knowledge manifests as understanding the social norms surrounding sustainability, recognising who to approach with sustainability questions, and being available and open to discussion. We find that a culture with limited openness and dialogue between employees and managers, as well as across departments, does not foster an environment in which people can share ideas, engage in social learning, or experiment with social innovations to improve sustainability outcomes. As such, the findings suggest that sustainability knowledge across organisational levels and departments plays a vital role in delivering on sustainability initiatives. If too heavily siloed in specific departments or hierarchical levels, progress towards delivering on sustainability goals will always be suboptimal. As such our study demonstrates that, although all four types of knowledge are vital in delivering sustainability outcomes, it is the dissemination of them across all hierarchical and departmental levels that is most important, rather than the strength of these types with specific individuals.

This leads to the significant theoretical contribution of this study: the need to add a temporal dimension to the four types of individual sustainability knowledge from Kaiser and Fuhrer (2003) when transitioning sustainability knowledge from an individual to an organisational level. We propose the novel additions of *knowing when to share knowledge* with others and *when to enact knowledge* through daily routines, as vital forms of knowledge to engender deeper cross-organisational learning and in

engendering repeatable and meaningful change to practice. The findings demonstrate that understanding the key moments to engage others in knowledge development is crucial and constitutes a distinct form of knowledge in its own right.

Regular communication about the hotel's sustainability mission and vision has been identified as essential in fostering knowledge dissemination (Sahoo et al., 2023). Employees often find that induction and online training are insufficient for developing their sustainability knowledge; instead, they benefit significantly from hands-on training that showcases practical applications of sustainable practices (procedural knowledge) and can see the beneficial outcomes (effectiveness knowledge) in a timely manner. Employees look to management as role models for sustainable behaviour, thus, we see the interventions at the right time as more fundamental in embedding knowledge, shaping motivations, and reshaping practices. Dissemination of declarative and effectiveness knowledge appears more valuable in the build-up to busy periods, where it has salience, but also when time pressures are lower allowing for reflection and learning. Conversely, procedural knowledge appears to disseminate more quickly through cooperating on tasks between peers, or better still, with managers, and visual reminders at the point of activity (through notices and posters) acting as cues to promote the continuance of more sustainable practices. Managers explaining why a routine is being changed prior to enactment; and then sharing the outcomes and celebrating with those delivering the change, provides greater dissemination of effectiveness knowledge and greater motivation for employees to enact new routines and suggest future routine changes. Finally, making space and time for people to share ideas or raise questions informally, thereby growing their own knowledge, is a temporal facilitator of social knowledge. As such, knowing *when to share knowledge* is its own type of knowledge, acting as an organisational lubricant that facilitates the dissemination of the other four types.

We also see a form of temporal knowledge in knowing *when to enact new knowledge*, acting more like a glue, linking together the other four types of knowledge into meaningful and repeatable action. The siloed nature of different types of knowledge across departmental and hierarchical levels (evident in the first part of the findings)

appears suboptimal. We clearly identify that it is the overall dissemination and sharing of unique types of knowledge, and the combination of them at point of action that has the greatest chance of reshaping daily practices to become more sustainable as part of daily routines. Managers' lower levels of procedural knowledge around daily routines and procedures mean that handing down new protocols to drive sustainability is unlikely to become embedded in operational routines if they can't be achieved with minimal time and reshaping of routines from the employees' perspective. By combining managerial declarative and effectiveness knowledge with operational employees' clearer understanding of procedure and routines, knowing *when to enact new knowledge* is a temporal form of collective knowledge, allowing for more organic development of routines and protocols. Managers must understand the need to ensure sufficient time and resources are allocated to embed new routines, with employee knowledge of when, in a busy routine, the right time to act is. There is also the need for reinforcement through sharing and celebrating the effectiveness of the actions (effectiveness knowledge) and creating a culture of shared accountability and support across hierarchical levels (social knowledge). As such, we propose that temporal knowledge acts as the key facilitator for the dissemination of all other types of sustainable knowledge across an organisation, playing a vital role in ensuring the success of sustainability in organisational contexts.

3.5.2 Practical Contribution

To address the operational challenges employees face, and to be consistent with the comprehensive organisational sustainability objectives, significant investment in tailored training programmes is necessary (Tanveer et al., 2024). This study offers important practical insights for the hospitality industry by foregrounding the internal, organisational dimensions of sustainability knowledge, an area often overshadowed by consumer-centric approaches. The findings underscore the need for hotel managers to adopt a more comprehensive and integrated approach to developing and disseminating sustainability knowledge across all hierarchical levels and departments. Rather than privileging declarative knowledge alone, effective sustainability practice demands attention to procedural, effectiveness, and social knowledge among employees.

Central to these insights is the introduction of a temporal dimension of sustainability knowledge. This concept emphasises the significance of timing in knowledge transmission and application, illustrating that knowledge shared at contextually relevant and emotionally resonant moments is more likely to be retained, acted upon, and subsequently disseminated. Hands-on, embedded training; informal, peer-to-peer interactions; and visible leadership engagement emerge as critical mechanisms for fostering this form of learning. In this regard, sustainability cannot be understood solely as a technical or policy challenge, but as a dynamic, socially embedded process that requires time, dialogue, and cultural integration.

Furthermore, managers must critically assess operational expectations and time constraints, recognising that routine pressures and under-resourcing frequently undermine sustainability efforts. Ultimately, this study argues for a paradigmatic shift in the practical implementation of sustainability in hotels, one that recognises knowledge as a temporal, relational, and organisational asset, and prioritises its meaningful integration into the everyday practices and values of all staff.

3.6 Limitations and Future Research

Although the current research presents invaluable insights, the findings are limited by its qualitative nature and the hotel industry's specific context. The study focused on multi-level, multi-organisational interviews, which restricts the generalisability of the results. In addition, the reliance on self-reported accounts introduces potential bias, and the cross-sectional design captures practices and perceptions at a single point in time rather than their evolution over the longer term.

Future research could investigate the extent to which these findings are transferable across other sectors, regions, and cultural contexts, particularly in industries where frontline staff play a critical role in sustainability practices. Longitudinal studies would be valuable in examining how sustainability training and knowledge-sharing strategies influence employee engagement and organisational outcomes over time. Comparative studies across different organisational structures could also shed light on how governance, resources, and leadership styles shape the integration of

sustainability knowledge into daily routines. Finally, mixed-methods approaches combining qualitative depth with quantitative breadth could offer a more comprehensive understanding of how different forms of knowledge (declarative, procedural, effectiveness, and social) interact to drive sustainable behaviour at work.

3.7 References

- ABDOU, A. H., HASSAN, T. H. & EL DIEF, M. M. 2020. A description of green hotel practices and their role in achieving sustainable development. *Sustainability*, 12, 9624.
- ACOSTA-PRADO, J. C., LÓPEZ-MONTOYA, O. H., SANCHÍS-PEDREGOSA, C. & VÁZQUEZ-MARTÍNEZ, U. J. 2020. Sustainable orientation of management capability and innovative performance: The mediating effect of knowledge management. *Sustainability*, 12, 1366.
- AGUINIS, H. 2009. *Performance management*. Pearson Prentice Hall, Upper Saddle River, NJ.
- AGUINIS, H. & KRAIGER, K. 2009. Benefits of training and development for individuals and teams, organizations, and society. *Annual Review of Psychology*, 60, 451-474.
- AL KOLIBY, I. S., MOHD SUKI, N. & ABDULLAH, H. H. 2022. Linking knowledge acquisition, knowledge dissemination, and manufacturing SMEs' sustainable performance: the mediating role of knowledge application. *The Bottom Line*, 35, 185-202.
- ALIPOUR, H., SAFAEIMANESH, F. & SOOSAN, A. 2019. Investigating sustainable practices in hotel industry-from employees' perspective: Evidence from a Mediterranean Island. *Sustainability*, 11, 6556.
- ALREAH, M., BUJDOSÓ, Z., KABIL, M., AKAAK, A., BENKÓ, K. F., SETIONINGTYAS, W. P. & DÁVID, L. D. 2022. Green human resources management in the hotel industry: A systematic review. *Sustainability*, 15, 99.
- ANDERSON, J. R. 1976. *Language, memory, and thought*. Lawrence Erlbaum Associates, Hillsdale, NJ.
- ASSORATGOON, W. & KANTABUTRA, S. 2023. Toward a sustainability organizational culture model. *Journal of Cleaner Production*, 400, 136666.
- AZUNGAH, T. 2018. Qualitative research: deductive and inductive approaches to data analysis. *Qualitative Research Journal*, 18, 383-400.
- BARRANTES-BRICENO, C. E., SANTOS, F. C. A. & NAGANO, M. S. 2024. Bridging excellence, knowledge management and sustainability: Introducing

- the 'Knowledge Management Excellence Model 21', a model for sustainable development goals alignment. *Journal of Cleaner Production*, 455, 142326.
- BELL, E. & WILLMOTT, H. 2014. *Qualitative research in business and management*. Sage, London.
- BENN, S., EDWARDS, M. & WILLIAMS, T. 2014. *Organizational change for corporate sustainability*. Routledge, London.
- BILLETT, S. 2020. *Learning in the workplace: Strategies for effective practice*. Routledge, London.
- BORDIAN, M. & GIL-SAURA, I. 2021. Do IMC and ecological knowledge drive value co-creation? The new way to loyalty in hospitality. *Sustainability*, 13, 10785.
- BRAUN, V. & CLARKE, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.
- BRAUN, V. & CLARKE, V. 2022. Conceptual and design thinking for thematic analysis. *Qualitative Psychology*, 9, 3.
- BROCCARDO, L., GIORDINO, D., YAQUB, M. Z. & ALSHIBANI, S. M. 2025. Implementing sustainability: What role do knowledge management and management accounting play? Agenda for environmentally friendly businesses. *Corporate Social Responsibility and Environmental Management*, 32, 383-403.
- BRYMAN, A. 2016. *Social research methods*. Oxford University Press, Oxford..
- BYRNE, B. 2004. Qualitative interviewing. *Researching Society and Culture*, 2, 179-192.
- CENTOBELLI, P., CERCHIONE, R. & ESPOSITO, E. 2020. Pursuing supply chain sustainable development goals through the adoption of green practices and enabling technologies: A cross-country analysis of LSPs. *Technological Forecasting and Social Change*, 153, 119920.
- CHAN, E. S., HON, A. H., CHAN, W. & OKUMUS, F. 2014. What drives employees' intentions to implement green practices in hotels? The role of knowledge, awareness, concern and ecological behaviour. *International Journal of Hospitality Management*, 40, 20-28.

- CHAN, E. S., HON, A. H., OKUMUS, F. & CHAN, W. 2017. An empirical study of environmental practices and employee ecological behavior in the hotel industry. *Journal of Hospitality & Tourism Research*, 41, 585-608.
- CHUA, B.-L. & HAN, H. 2022. Green hotels: The state of green hotel research and future prospects. *Journal of Travel & Tourism Marketing*, 39, 465-483.
- CHUA, K., THINAKARAN, R. & VASUDEVAN, A. 2023. Knowledge Sharing Barriers in Organizations-A Review. *TEM Journal*, 12.
- CHUNG, K. C. 2020. Green marketing orientation: Achieving sustainable development in green hotel management. *Journal of Hospitality Marketing & Management*, 29, 722-738.
- COOPER, C. 2006. Knowledge management and tourism. *Annals of tourism research*, 33, 47-64.
- CRESWELL, J. W. & POTH, C. N. 2016. *Qualitative inquiry and research design: Choosing among five approaches*. Sage, Thousand Oaks, CA..
- DEMETER, C., FECHNER, D. & DOLNICAR, S. 2023. Progress in field experimentation for environmentally sustainable tourism—A knowledge map and research agenda. *Tourism Management*, 94, 104633.
- DOLNICAR, S. 2020. Designing for more environmentally friendly tourism. *Annals of Tourism Research*, 84, 102933.
- FAWEHINMI, O., YUSLIZA, M. Y., MOHAMAD, Z., NOOR FAEZAH, J. & MUHAMMAD, Z. 2020. Assessing the green behaviour of academics: The role of green human resource management and environmental knowledge. *International Journal of Manpower*, 41, 879-900.
- FRISK, E. & LARSON, K. L. 2011. Educating for sustainability: Competencies & practices for transformative action. *Journal of Sustainability Education*, 2, 1-20.
- GEIGER, S. M., GEIGER, M. & WILHELM, O. 2019. Environment-specific vs. general knowledge and their role in pro-environmental behavior. *Frontiers in psychology*, 10, 718.
- GIOIA, D. A., CORLEY, K. G. & HAMILTON, A. L. 2013. Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, 16, 15-31.

- HAN, H., LEE, J.-S., TRANG, H. L. T. & KIM, W. 2018. Water conservation and waste reduction management for increasing guest loyalty and green hotel practices. *International Journal of Hospitality Management*, 75, 58-66.
- HE, Z., LIU, Y., LIU, X., WANG, F. & ZHU, H. 2022. Influence of multi-dimensional environmental knowledge on residents' waste sorting intention: Moderating effect of environmental concern. *Frontiers in Psychology*, 13, 957683.
- HO, H. C. & YEUNG, D. Y. 2019. Effects of social identity salience on motivational orientation and conflict strategies in intergenerational conflict. *International Journal of Psychology*, 54, 108-116.
- HWANG, S., WALLER, R., HAWES, D. J. & ALLEN, J. L. 2021. The influence of antisocial behavior and callous-unemotional traits on trajectories of school engagement and achievement in South-Korean children. *Journal of Youth and Adolescence*, 50, 788-802.
- JACKSON, A., BOSWELL, K. & DAVIS, D. 2011. Sustainability and triple bottom line reporting—What is it all about. *International Journal of Business, Humanities and Technology*, 1, 55-59.
- JUVAN, E. & DOLNICAR, S. 2014. The attitude–behaviour gap in sustainable tourism. *Annals of Tourism Research*, 48, 76-95.
- KAISER, F. G. & FUHRER, U. 2003. Ecological behavior's dependency on different forms of knowledge. *Applied Psychology*, 52, 598-613.
- KHALIL, N., CHE ABDULLAH, S. N., HARON, S. N. & HAMID, M. Y. 2024. A review of green practices and initiatives from stakeholder's perspectives towards sustainable hotel operations and performance impact. *Journal of Facilities Management*, 22, 653-682.
- KHATTER, A. 2023. Challenges and solutions for environmental sustainability in the hospitality sector. *Sustainability*, 15, 11491.
- KIM, Y. H., BARBER, N. & KIM, D.-K. 2019. Sustainability research in the hotel industry: Past, present, and future. *Journal of Hospitality Marketing & Management*, 28, 576-620.
- KNEZEVIC CVELBAR, L., GRÜN, B. & DOLNICAR, S. 2024. Do employees hold the key to environmental sustainability in tourism businesses? Empirical evidence from a field study. *Journal of Sustainable Tourism*, 32, 245-258.

- KYRIAKOPOULOS, K. 2011. Improvisation in product innovation: The contingent role of market information sources and memory types. *Organization Studies*, 32, 1051-1078.
- LIU, C.-H. S. & DONG, T.-P. 2021. Discovering the relationship among knowledge management, sustainability marketing and service improvement: the moderating role of consumer interest. *International Journal of Contemporary Hospitality Management*, 33, 2799-2816.
- LOPEZ-CABRALES, A. & VALLE-CABRERA, R. 2020. Sustainable HRM strategies and employment relationships as drivers of the triple bottom line. *Human Resource Management Review*, 30, 100689.
- MARTÍNEZ-MARTÍNEZ, A., CEGARRA-NAVARRO, J.-G. & GARCIA-PEREZ, A. 2023. Sustainability knowledge management and organisational learning in tourism: Current approaches and areas for future development. *Knowledge Management, Organisational Learning and Sustainability in Tourism*, 1-13.
- MARTÍNEZ-MARTÍNEZ, A., CEGARRA-NAVARRO, J.-G., GARCIA-PEREZ, A. & WENSLEY, A. 2019. Knowledge agents as drivers of environmental sustainability and business performance in the hospitality sector. *Tourism management*, 70, 381-389.
- MATSUO, M. & KUSUMI, T. 2002. Salesperson's procedural knowledge, experience and performance: an empirical study in Japan. *European Journal of Marketing*, 36, 840-854.
- MCGINLEY, S., WEI, W., ZHANG, L. & ZHENG, Y. 2021. The state of qualitative research in hospitality: A 5-year review 2014 to 2019. *Cornell Hospitality Quarterly*, 62, 8-20.
- MITTAL, S. & DHAR, R. L. 2016. Effect of green transformational leadership on green creativity: A study of tourist hotels. *Tourism Management*, 57, 118-127.
- MO, Z., LIU, M. T., WONG, I. A. & WU, P. 2022. The role of (in) congruence modes between supervisor prescriptive and descriptive norms on employee green behavior. *Tourism Management*, 93, 104627.
- MOHD SUKI, N. & MOHD SUKI, N. 2015. Consumers' environmental behaviour towards staying at a green hotel: Moderation of green hotel knowledge.

- Management of Environmental Quality: An International Journal*, 26, 103-117.
- NIMRI, R., PATIAR, A. & JIN, X. 2020. The determinants of consumers' intention of purchasing green hotel accommodation: Extending the theory of planned behaviour. *Journal of Hospitality and Tourism Management*, 45, 535-543.
- NONAKA, L., TAKEUCHI, H. & UMEMOTO, K. 1996. A theory of organizational knowledge creation. *International Journal of Technology Management*, 11, 833-845.
- OKUMUS, F., KÖSEOĞLU, M. A., CHAN, E., HON, A. & AVCI, U. 2019. How do hotel employees' environmental attitudes and intentions to implement green practices relate to their ecological behavior? *Journal of Hospitality and Tourism Management*, 39, 193-200.
- OTTO, S., KAISER, F. G. & ARNOLD, O. 2014. The critical challenge of climate change for psychology. *European Psychologist*.
- PAILLÉ, P., CHEN, Y., BOIRAL, O. & JIN, J. 2014. The impact of human resource management on environmental performance: An employee-level study. *Journal of Business Ethics*, 121, 451-466.
- PATTON, M. Q. 2014. *Qualitative research & evaluation methods: Integrating theory and practice*. Sage, Thousand Oaks, CA.
- PHAM, N. T., VO-THANH, T., SHAHBAZ, M., HUYNH, T. L. D. & USMAN, M. 2020. Managing environmental challenges: Training as a solution to improve employee green performance. *Journal of Environmental Management*, 269, 110781.
- PRAKASH, S., SHARMA, V. P., SINGH, R., VIJAYVARGY, L. & NILAISH 2023. Adopting green and sustainable practices in the hotel industry operations-an analysis of critical performance indicators for improved environmental quality. *Management of Environmental Quality: An International Journal*, 34, 1057-1076.
- ROBERTSON, J. L. & BARLING, J. 2017. Toward a new measure of organizational environmental citizenship behavior. *Journal of Business Research*, 75, 57-66.
- SAHOO, S., KUMAR, A. & UPADHYAY, A. 2023. How do green knowledge management and green technology innovation impact corporate environmental

- performance? Understanding the role of green knowledge acquisition. *Business Strategy and the Environment*, 32, 551-569.
- SCHAHN, J. & HOLZER, E. 1990. Studies of individual environmental concern: The role of knowledge, gender, and background variables. *Environment and Behaviour*, 22, 767-786.
- SERRAT, O. 2017. *Knowledge solutions: Tools, methods, and approaches to drive organisational performance*. Springer, Singapore.
- SIMKINS, S. & MAIER, M. 2023. *Just in time teaching: Across the disciplines, and across the academy*. Taylor & Francis, London.
- STAR, J. R. 2005. Reconceptualizing procedural knowledge. *Journal for Research in Mathematics Education*, 36, 404-411.
- TANVEER, M. I., YUSLIZA, M. Y. & FAWEHINMI, O. 2024. Green HRM and hospitality industry: challenges and barriers in adopting environmentally friendly practices. *Journal of Hospitality and Tourism Insights*, 7, 121-141.
- TEN BERGE, T. & VAN HEZEWIJK, R. 1999. Procedural and declarative knowledge: An evolutionary perspective. *Theory & Psychology*, 9, 605-624.
- WAN, Q. & DU, W. 2022. Social capital, environmental knowledge, and pro-environmental behavior. *International Journal of Environmental Research and Public Health*, 19, 1443.
- WAQANIMARAVU, M. & ARASANMI, C. N. 2020. Employee training and service quality in the hospitality industry. *Journal of Foodservice Business Research*, 23, 216-227.
- WEICK, K. E. 1995. What theory is not, theorizing is. *Administrative Science Quarterly*, 40, 385-390.
- XIAO, H. & SMITH, S. L. 2007. The use of tourism knowledge: Research propositions. *Annals of Tourism Research*, 34, 310-331.
- YAN, S., HENNINGER, C. E., JONES, C. & MCCORMICK, H. 2020. Sustainable knowledge from consumer perspective addressing microfibre pollution. *Journal of Fashion Marketing and Management: An International Journal*, 24, 437-454.

- YU, Y., LI, X. & JAI, T.-M. 2017. The impact of green experience on customer satisfaction: Evidence from TripAdvisor. *International Journal of Contemporary Hospitality Management*, 29, 1340-1361.
- ZARAGOZA-SÁEZ, P. C., CLAVER-CORTÉS, E., MARCO-LAJARA, B. & ÚBEDA-GARCÍA, M. 2023. Corporate social responsibility and strategic knowledge management as mediators between sustainable intangible capital and hotel performance. *Knowledge Management, Organisational Learning and Sustainability in Tourism*. Routledge.
- ZHANG, Y. & CHABAY, I. 2020. How “green knowledge” influences sustainability through behavior change: Theory and policy implications. *Sustainability*, 12, 6448.
- ZHU, J., TANG, W., WANG, H. & CHEN, Y. 2021. The influence of green human resource management on employee green behavior—a study on the mediating effect of environmental belief and green organizational identity. *Sustainability*, 13, 4544.

Reflective Bridge Between Chapter III and Chapter IV

The second paper deepened the thesis by moving beyond motivation and examining the multi-dimensional forms of sustainability knowledge that shape how employees make sense of and enact sustainability in hotel operations. Through this analysis, it became increasingly clear that employees' willingness to participate in sustainability (as highlighted in Paper 1) is significantly constrained or enabled by the types of knowledge they hold, the ways this knowledge circulates across departments, and the degree to which it is supported through organisational structures.

During analysis, I observed that even when employees were enthusiastic and committed, their understanding of sustainability remained partial, shaped by their role, work routines, and access to information. In many cases, employees described learning "by figuring things out" or "copying others," indicating that sustainability knowledge was not being systematically shared or reinforced. This pattern suggested that knowledge was not merely an individual resource but a collective process that depends on organisational conditions. As I revisited the transcripts, this fragmentation illuminated a deeper issue: sustainability knowledge did not accumulate coherently across the organisations. Instead, it remained siloed, episodic, and dependent on chance interactions or personal interest.

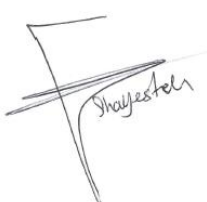
These reflections highlighted an important gap not just in what employees knew, but in how organisations enable learning, how routines, communication patterns, leadership practices, and everyday work interactions structure the development and embedding of sustainability knowledge. It became clear that understanding sustainability in hotels required examining not only engagement (Paper 1) and knowledge (Paper 2) but the organisational learning mechanisms (OLMs) through which sustainability becomes stabilised, shared, and normalised over time.

This realisation led directly to the focus of the third paper. Chapter IV (Paper 3) therefore shifts from examining individual motivation and knowledge to analysing sustainability as an organisational learning process. Using the OLM framework, it explores how learning is enabled or constrained within hotel systems, and how

employees' sustainability knowledge is translated, or fails to be translated, into collective organisational practice. This transition reflects a natural progression in the thesis: from understanding *why* employees engage, to *what* they know, to *how* organisations learn in ways that embed sustainability as part of everyday hotel operations.

**Chapter IV- Organisational
Learning Mechanisms within
Fragmented Learning Ecologies:
A Case Study in Hotel
Sustainability**

Statement of Authorship

This declaration concerns the article entitled:			
Organisational Learning Mechanisms within Fragmented Learning Ecologies: A Case Study in Hotel Sustainability			
Publication status (tick one)			
Draft manuscript	<input checked="" type="checkbox"/>	Submitted	<input type="checkbox"/>
		In review	<input type="checkbox"/>
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		Published	<input type="checkbox"/>
Publication details (citation where relevant)			
Copyright status (tick the appropriate statement)			
	<input type="checkbox"/>	The material has been published with a CC-BY license	<input type="checkbox"/>
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Candidate's contribution to the paper (provide details, and also indicate as a percentage)	<p>The candidate contributed to / considerably contributed to / predominantly executed the...</p> <p>Designed and conducted all data collection and analysis (100%), on presentation in journal format: "independently wrote full first draft and responded to supervisor commentary (90%)."</p>		
Statement from Candidate	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature.		
Signed (typed signature)			Date
			12/12/2025

Abstract

This study examines how sustainability learning is enacted within hotel operations by analysing organisational learning mechanisms (OLMs) in an independently owned Scottish hotel. Drawing on a qualitative embedded single-case study and 24 interviews across departments and contract types, the findings show that sustainability learning is active but highly uneven, forming a Fragmented Learning Ecology (FLE). Formal OLMs are symbolic and inconsistently diffused, informal learning is powerful but localised, and external learning, particularly via suppliers, remains concentrated in specific departments. Leadership emerges as a central integrative mechanism that can connect internal and external, online and offline OLMs; its absence, however, exposes structural inequalities in access to sustainability knowledge. The study contributes by developing the FLE concept and demonstrating how fragmentation shapes both learning and unlearning in hospitality. Managerially, the findings highlight the need for inclusive, routine-embedded learning structures to support the durable integration of sustainability practices.

Keywords: Sustainability; Hospitality; Organisational Learning; Learning Mechanisms; Practice-Based Learning; Fragmented Learning Ecology

4.1 Introduction

Sustainability has become a strategic priority in the hospitality sector, with hotels increasingly expected to reduce environmental impact, support local communities, and respond to social and regulatory expectations (Chua et al, 2022). Despite rising expectations, sustainability practices remain uneven in implementation, often failing to translate into consistent operational routines (Asante, 2024; Khan et al., 2022). As a highly people-intensive industry, hotels depend on employees to operationalise sustainability through everyday practices, including resource management, service decisions, and cross-departmental collaboration (Boeske, 2023, Baum and Hai, 2019, Gulakdeniz and Karadas, 2024). Yet, structural challenges, such as high staff turnover, hierarchical communication flows, and fragmented internal coordination, frequently disrupt knowledge continuity and limit the consistent application of sustainability initiatives across teams (Robinson et al., 2019).

Organisational learning (OL) provides a critical theoretical foundation for understanding how knowledge evolves from individual insight to embedded organisational practice (Argyris and Schön, 1997). Effective sustainability implementation requires more than strategic intent; it depends on an organisation's ability to continuously acquire, interpret, and integrate knowledge into daily routines (Crossan et al., 1999; Baah et al., 2020). OL, therefore, offers a valuable lens for examining not only the introduction of sustainability but also its integration into organisational behaviour.

Organisational Learning Mechanisms (OLMs) explain the processes through which learning is embedded and retained within organisations (Lipshitz et al., 2002). OLMs include both formal and informal structures, such as training, standard operating procedures, feedback systems, and cross-team knowledge exchange, that enable knowledge transfer and institutionalisation (Popova-Nowak et al, 2015). In hospitality environments, where work is operationally intensive, team-dependent, and time-pressured, OLMs are essential for sustaining learning across shifts and departments (Baum, 2015; Fiol et al, 2017).

While workplace learning research highlights Learning Ecologies as dynamic environments shaped through social, material, and contextual interactions (Barnett et al., 2019), hospitality settings rarely exhibit the continuity, connectivity, and shared learning conditions needed for such ecologies to function cohesively. Instead, learning is frequently disrupted by shift-based schedules, departmental silos, operational intensity, and reliance on informal communication (Robinson et al., 2019). As a result, learning processes remain episodic, uneven, and insufficiently institutionalised.

Drawing on a case study of an independent Scottish hotel and 24 staff interviews, this paper examines how sustainability learning is enabled and constrained through organisational learning mechanisms in everyday hotel work. The findings show that while learning activities and exchange points exist, they are not structurally supported to travel, accumulate, or embed across organisational levels. This paper conceptualises these conditions as Fragmented Learning Ecologies (FLEs), workplace environments where learning flows are discontinuous, unevenly shared, and weakly institutionalised, preventing sustainability practices from stabilising into enduring collective routines. By advancing this concept, the study contributes to sustainability and organisational learning literature by demonstrating that the core challenge in hospitality is not a lack of learning activity, but the absence of cohesive workplace learning conditions that allow sustainability knowledge to circulate, embed, and persist across teams, roles, and operational rhythms.

4.2 Literature Review

This section reviews the literature on organisational learning and its relevance to sustainability in the hotel sector. It begins by outlining core concepts of organisational learning and explains how learning enables organisations to adapt and embed sustainability practices. It then examines organisational learning mechanisms as the processes through which learning becomes institutionalised. Building on this, the section discusses how sustainability learning unfolds within the hospitality industry's practice-based and often fragmented environments. Finally, it introduces the concept of Fragmented Learning Ecologies (FLEs) to highlight the structural and relational discontinuities that shape how sustainability knowledge is created, shared, and

constrained in hotel operations. While prior research has examined organisational learning mechanisms in sustainability contexts (Argyris and Schön, 1996; Lipshitz et al., 2006), less attention has been given to how these mechanisms operate within fragmented service environments such as hotels. The concept of a Fragmented Learning Ecology is therefore explored in this study as a way of understanding how sustainability knowledge circulates unevenly across departments, roles, and employment arrangements within hotel organisations. The empirical analysis presented later in this chapter examines how such fragmentation emerges in practice and how it shapes the embedding of sustainability knowledge within hotel operations.

4.2.1 Organisational Learning in Sustainability

Organisational Learning has long been recognised as a core capability that enables firms to adapt, innovate, and remain competitive in dynamic environments (Argyris and Schön, 1997). At its core, OL concerns how organisations acquire, interpret, and act on knowledge to improve performance and resilience (Crossan et al., 1999). It extends beyond individual cognition to encompass collective processes through which experiences are reflected upon and institutionalised in policies, systems, and everyday routines (Argyris and Schön, 1997; Argote and Miron-Spektor, 2011). This collective dimension positions OL as both a behavioural and structural process, linking individual learning to organisational change (Crossan et al., 1999). The framework proposed by Argyris and Schön (1997) distinguishes between single-loop learning, where organisations correct errors within existing norms, and double-loop learning, where underlying values and assumptions are questioned to achieve deeper transformation. This distinction suggests that learning in organisations involves both adaptation and reflection, key requirements for addressing complex challenges such as sustainability (Trevisan et al., 2024; Hermelingmeier et al., 2021).

Sustainability goals often demand systemic rather than incremental change, requiring organisations to unlearn outdated practices and develop new cognitive and operational logics (Martínez-Martínez et al., 2023). Embedding sustainability within operations requires learning processes that connect environmental, social, and economic objectives across organisational levels (Trevisan et al., 2024). OL provides this

foundation by emphasising reflection, experimentation, and adaptation processes essential for translating sustainability from rhetoric into practice (Dzhengiz, 2020). Through OL, organisations can align values and behaviours, enabling sustainability to become part of organisational identity and decision-making (Benn et al., 2014).

Despite its relevance, OL has been critiqued for conceptual abstraction and limited operational clarity (Easterby-Smith et al, 2011). Much of the literature discusses learning as a desirable capability but pays limited attention to how it is achieved and sustained (Antonacopoulou, 2006; Popova-Nowak et al, 2015; Easterby-Smith et al, 2011). In response, scholars have called for a more process-oriented approach that examines the mechanisms through which learning is enacted in organisations (Crossan et al., 1999; Antonacopoulou, 2006; Basten et al, 2018). While early theories of organisational learning focused primarily on structural and cognitive processes, more recent perspectives emphasise the relational and contextual nature of learning (Razali et al, 2023). Scholars argue that learning in organisations unfolds not only through formal systems but also through everyday interactions and social practices (Marsick et al, 2015; Elkjaer, 2004). This shift has led to growing interest in the concept of Learning Ecologies, which highlights how knowledge is co-created through the interplay of people, tools, and environments rather than prescribed training or procedures (Barron, 2006; Goodyear et al, 2014). Integrating this ecological view into organisational learning helps explain how learning becomes situated and dynamic, an important consideration for service sectors like hospitality, where much of the learning is experiential and socially mediated (Goodyear et al, 2014; Barnett et al, 2019). This growing focus on the how of learning has led to the development of organisational learning mechanisms (Lipshitz et al., 2002), which identify the formal and informal processes through which knowledge is created, shared, and institutionalised in organisational practice.

4.2.2 Organisational learning mechanisms and sustainability

Building on the foundations of Organisational Learning, Organisational Learning Mechanisms (OLMs) describe the formal and informal processes through which learning becomes embedded and retained within organisational systems (Lipshitz et

al., 2002). OLMs operationalise learning by transforming individual or group insights into collective routines and practices that persist over time (Argote and Miron-Spektor, 2011; Crossan et al., 1999; Antonacopoulou, 2006). They represent the tangible structures through which knowledge is created, shared, and institutionalised, bridging the gap between cognitive understanding and organisational behaviour (Popova-et al, 2015; Basten et al, 2018). OLMs encompass both formal mechanisms, such as training, feedback systems, and standard operating procedures and informal ones, including mentoring, storytelling, and peer problem-solving (Lipshitz et al., 2006). They also operate across organisational boundaries: internal OLMs refer to learning processes contained within the organisation, such as team meetings, internal workshops, or cross-departmental coordination while external OLMs involve interactions with actors outside the organisation, including suppliers, industry networks, accreditation bodies, and regulatory agencies (Lipshitz et al., 2002; Crossan et al., 1999) These mechanisms enable organisations to translate experience into institutional memory, ensuring that learning survives staff changes and operational disruptions (Argote et al, 2011). By doing so, they help integrate tacit and explicit knowledge, creating a stable foundation for continuous improvement and adaptation (Fiol et al, 2017).

In sustainability contexts, OLMs are particularly vital because they convert organisational intentions into consistent operational practices (Hermelingmeier et al , 2021; Schönherr et al., 2023). They facilitate the translation of sustainability goals into shared routines by supporting feedback, reflection, and coordination across teams and departments (Benn et al., 2014). However, their effectiveness depends on communication quality, leadership commitment, and the extent to which learning is institutionalised across organisational levels (Schönherr et al., 2023). Sustaining effective organisational learning mechanisms in hospitality requires navigating structural and systemic constraints rather than merely addressing operational challenges (Baum and Hai, 2019). The sector's reliance on routine-driven coordination and short feedback cycles often prioritises immediate performance outcomes over reflective learning (Kleefstra et al., 2020). Furthermore, the temporality of employment and the compartmentalisation of roles weaken the integration of new knowledge into organisational systems, resulting in fragmented learning structures

(Robinson et al., 2019). In such conditions, learning mechanisms may operate in isolation, capturing lessons but failing to embed them, thereby limiting their contribution to long-term sustainability transformation.

4.2.3 Sustainability learning in hospitality's fragmented learning ecology

Translating sustainability commitments into consistent organisational practice remains a challenge in hospitality (Oriade et al., 2021). Hotels operate in complex, service-driven environments where learning occurs through doing, observation, and immediate feedback rather than structured training (Dredge et al., 2015). As a result, knowledge transfer is largely experiential and tacit, embedded in daily social interactions and operational routines (Işık et al., 2021).

While this practice-based learning enables adaptability, it often leads to uneven diffusion of sustainability knowledge. Employees acquire insights through teamwork and informal exchanges, but these rarely extend beyond specific shifts or departments (Anand et al., 2023). Sustainability learning, therefore, occurs informally and contextually, shaped by relationships and timing rather than institutional systems (Pham et al., 2019). The issue is not a lack of learning but a lack of integration, how experiential knowledge circulates and endures across organisational levels. Addressing this requires understanding hospitality workplaces as interconnected systems of people, materials, and contexts.

Organisational learning does not occur in isolation but within dynamic systems shaped by social, material, and contextual interactions (Elkjaer, 2004). The concept of Complex Learning Environments (CLEs) captures this complexity, recognising that learning emerges through relationships, technologies, and everyday practices that evolve over time (Goodyear et al, 2019; Barnett et al, 2019). Within CLEs, knowledge is generated and refined through adaptive feedback loops that depend on collaboration and reflection (Sangrá et al., 2019). This view complements organisational learning by shifting attention from structured mechanisms to the situated and relational conditions that enable learning to occur (Barron, 2006).

However, in hospitality, these learning environments are rarely cohesive. Work is divided across shifts and departments, often under intense temporal and operational pressures (Baum, 2018). As a result, opportunities for reflective or cross-departmental learning are limited, and sustainability knowledge tends to circulate locally within teams rather than across the organisation (Robinson et al., 2019). This study conceptualises such conditions as Fragmented Learning Ecologies (FLEs): *workplace environments where learning occurs but remains discontinuous, localised, and weakly connected to organisational systems*. In hospitality contexts, this fragmentation constrains how sustainability learning evolves and endures. Employees often develop adaptive, experiential knowledge through direct practice, but the lack of formal mechanisms to capture and disseminate these insights weakens institutional learning (Pham et al., 2019). Consequently, sustainability initiatives risk becoming episodic, visible in isolated departments or specific teams but failing to achieve systemic organisational impact.

The literature demonstrates that organisational learning and its mechanisms are essential for embedding sustainability within organisations, yet hospitality presents unique challenges due to its structural fragmentation and high labour mobility. While learning ecology perspectives offer valuable insights into how learning unfolds through social and contextual interactions, little research has examined how such learning operates in fragmented service settings like hotels. This study addresses this gap by applying the integrated lens of organisational learning, organisational learning mechanisms, and learning ecologies to explore how sustainability learning is enacted, shared, and constrained within hospitality operations. It introduces the concept of fragmented learning ecologies to explain how structural, relational, and operational discontinuities inhibit sustained knowledge flow. In doing so, it contributes to understanding how hotels can develop cohesive learning systems that embed sustainability into everyday organisational practice.

4.3 Methodology

This study adopts a qualitative case study approach to explore sustainability-related organisational learning mechanisms within the operational context of a hotel. Case study research is particularly suited to addressing “how” and “why” questions about contemporary organisational phenomena, especially where the boundaries between the phenomenon and its real-world context are blurred (Yin, 2018). As organisational learning processes are deeply embedded in daily routines, departmental structures, and interpersonal relationships, they cannot be meaningfully separated from their organisational setting (Argyris, 1996; Stake, 1995). A case study design is therefore well placed to provide the detailed, contextualised understanding needed to capture these dynamics (Yazan, 2015).

A single in-depth case was chosen to enable a holistic exploration of OLMs as they unfold across multiple layers of practice. Single-case designs are appropriate when the case is critical, unique, or revelatory (Yin, 2018). As described by Yin (2018) a revelatory case study is one in which researchers gain access to a phenomenon that was previously difficult or impossible to observe systematically. A single case study is particularly apt for this research because the objective is to develop a deep, context-rich understanding of the processes and interactions that underpin sustainability-related learning in a fragmented learning ecology. OLMs are inherently embedded in organisational culture, daily routines, leadership behaviours, and interpersonal relationships, all of which require holistic examination to capture their full complexity. An embedded single case allows the study to trace these interconnections as they naturally unfold within one organisational setting, preserving the richness and integrity of the social context (Stake, 1995).

This positioning resonates with calls in organisational learning and sustainability scholarship for more context-sensitive, qualitative investigations that can illuminate the complexity of how employee-driven insights are captured, shared, and retained over time (Argyris and Schön, 1997; Baum, 2018; Schönherr et al., 2023). By studying this hotel as a revelatory case, the research contributes to addressing the limited understanding of how OLMs support the embedding of sustainability in the hospitality

sector. These characteristics create a rare opportunity to observe the institutionalisation of sustainability learning mechanisms that are normally hidden, informal, and empirically underexplored in research (Schönherr et al., 2023).

While Yin (2018) methodological principles provide a structured foundation for case design, the study's interpretivist orientation aligns more closely with the perspective of Stake (1995). This author emphasises that case study research is as much about generating rich, situated understanding as it is about design logic.

The combination of Yin (2018) structured logic with the interpretivist stance of Stake (1995) enables this research to balance methodological rigour with sensitivity to context, lived experience, and emergent meaning-making. This is critical for a study where the phenomena under investigation, formal and informal, internal and external OLMs, are deeply shaped by leadership behaviours, departmental cultures, and operational constraints. By drawing on both structured and interpretivist case study traditions, this research examines how OLMs are enacted, how they interact with organisational structures, and how they support, or hinder, the integration of sustainability into everyday hotel operations.

4.3.1 Case study design

Building on the methodological rationale outlined above, the research was operationalised through an embedded single-case design (Yin, 2018). The study focused on one bounded case: an independently owned, sustainability-committed hotel in Scotland, while examining multiple embedded units of analysis across organisational levels (e.g., managers, supervisors, frontline employees, interns). This structure enabled the research to capture differences in how OLMs were enacted and experienced across departments and roles, while still treating the hotel as a single, unified case system.

From an interpretivist perspective, meaning is constructed through participants' lived experiences and situated interpretations (Stake, 1995). For this reason, depth of inquiry was prioritised over breadth: studying multiple sites would have risked fragmenting

the analysis across heterogeneous organisational contexts. A single, information-rich case instead provided the opportunity to develop a nuanced account of how sustainability learning is understood, negotiated, and institutionalised within one coherent organisational environment (Yin, 2018).

The empirical component of this study focuses on an independent hotel located in Scotland that has publicly positioned sustainability as a core element of its organisational identity. The hotel operates as a medium-sized hospitality business offering accommodation, restaurant services, and event facilities, and employs staff across multiple operational departments including front-of-house, housekeeping, food and beverage, and maintenance.

As an independent hotel, organisational decision-making is relatively decentralised compared with large chain hotels, allowing sustainability initiatives to emerge through both managerial leadership and employee participation. The hotel has implemented a range of sustainability practices, including waste reduction initiatives, resource conservation measures, and collaboration with local suppliers. These practices provided an appropriate context for examining how sustainability knowledge circulates within daily operations and how organisational learning mechanisms support or constrain the embedding of sustainability practices.

The organisation is anonymised in this study to protect confidentiality. Certain contextual details have therefore been generalised while still providing sufficient information to understand the organisational setting in which sustainability practices are enacted.

The case hotel was selected based on three criteria:

1. *Organisational autonomy* – as an independent property, the hotel has discretion to design and implement sustainability strategies without corporate standardisation, allowing observation of locally embedded OLMs (Chan et al, 2016)
2. *Sustainability commitment* – the hotel has declared environmental goals and received local recognition, providing a mature context for examining

sustainability as an organisational value rather than a symbolic initiative (Mensah et al, 2021).

3. *Internal diversity* – its workforce spans multiple departments and contract types, offering varied perspectives and a microcosm of the wider hospitality sector (Baum, 2018).

Consistent with Yin (2018) guidance for theory-driven case study research, this study was guided by theoretical propositions derived from the OLM framework. These propositions focused on how learning is institutionalised through both formal and informal structures and how sustainability knowledge is socially constructed, shared, and embedded across organisational levels (Lipshitz et al., 2006; Hermelingmeier et al, 2021). The interpretivist orientation further enabled a detailed exploration of the meanings, power relations, and contextual factors that shape how sustainability learning is enacted in practice (Stake, 1995). This integration of theoretical framing, applied case design, and purposeful case selection ensured that the study produced both deep contextual understanding and theoretically informed insights into the role of OLMs in sustainable hotel operations.

4.3.2 Data collection methods

Following Yin (2018) emphasis on the use of multiple sources of evidence to strengthen construct validity and enhance the credibility of findings, this study draws on three primary sources of data: semi-structured interviews, field notes and researcher memos, and organisational documents and artefacts. The interviews form the core of the dataset, supported by observational and documentary evidence that provide contextual depth and allow for triangulation. Field notes capture immediate impressions, non-verbal cues, and informal interactions observed during the research process, while organisational artefacts such as environmental signage, notice board postings, and training materials offer further insight into how sustainability messages are communicated within the hotel. Access to formal organisational documents is limited due to confidentiality agreements; however, supplementary information on sustainability initiatives and training processes is obtained through participant

accounts and visual evidence. Overall, the analysis followed an abductive approach, combining inductive theme development with theory-informed interpretation.

Data collection occurred over four visits over 2024 and 2025, including one preliminary stay as a guest that provided early contextual understanding of hotel operations and sustainability practices prior to formal data collection. During this period, the Head Chef position changed; therefore, interviews were conducted with both the former and newly appointed chefs to capture continuity and potential shifts in sustainability-related learning practices. These visits allowed the researcher to observe seasonal and operational variations in sustainability practices and learning interactions. The study involves 24 participants, selected through purposive and maximum variation sampling (Patton, 2014), to ensure representation across different departments, hierarchical levels, and employment types (see Table 5). This diversity allows the research to capture multiple perspectives on how OLMs related to sustainability are enacted, understood, and experienced in the hotel. In the hotel industry, a well-recognised distinction exists between Front-of-House (FOH) roles, such as receptionists, concierges, and guest-facing managers, and Back-of-House (BOH) roles, including housekeepers, kitchen employees, and maintenance employees. FOH areas are typically conceptualised as performance spaces where employees manage impressions in direct contact with guests, while BOH areas represent backstage spaces where such impression management is less necessary (Boon, 2007). Yet this boundary is not always clear: for instance, housekeeping employees often move between guest-facing tasks and operational routines, navigating both spheres simultaneously (Weber et al., 2022).

Table 5: Participant Overview

Participant Number	Position	Role Type	Type of Contract
1	Front Office Receptionist	FOH	Permanent
2	Breakfast Manager	BOH	Permanent
3	Head Chef	BOH	Permanent
4	Housekeeping Supervisor	BOH	Permanent
5	Duty Manager	FOH*	Permanent
6	Bar Manager	BOH	Permanent
7	Sales Executive	FOH	Permanent
8	Head of Housekeeping	BOH	Permanent
9	Marketing Manager	FOH	Permanent
10	Head of Concierge	FOH	Permanent
11	Breakfast Employee-seasonal	BOH	Seasonal
12	Breakfast Employee-seasonal	BOH	Seasonal
13	Breakfast Employee-seasonal	BOH	Seasonal
14	Sustainability Intern	FOH*	Intern
15	Room Division Manager	FOH	Permanent
16	Reservation	FOH	Permanent
17	Event Supervisor	FOH	Permanent
18	HR Manager	BOH	Permanent
19	General Manager	FOH*	Permanent
20	New Head Chef	BOH	Permanent
21	Hotel Owner	BOH	Permanent
22	Food & Beverage Assistant	FOH	Part-time
23	Food & Beverage Assistant	FOH	Part-time
24	Food & Beverage Assistant	FOH	Part-time

Note 1: FOH = Front of House; BOH = Back of House. "FOH" indicates a primarily FOH role with some cross-functional exposure.*

Note 2: The Head Chef role was interviewed twice to include both the former and current postholders.

For the purposes of this study, FOH employees in the case hotel worked in visible, guest-facing contexts with more regular communication and managerial oversight, while BOH employees worked largely behind the scenes under time pressure in routinised roles, with more limited managerial oversight. This classification reflects well-recognised structural divisions in hospitality, where FOH roles are guest-facing and discursive, while BOH roles are operational and less visible (Weber et al., 2022; Boon, 2007). Contract type was also included as employment precarity emerged as a significant factor shaping access to sustainability-related learning. Table 5 shows that seasonal employees were concentrated exclusively in BOH roles, highlighting a structural segmentation that later informed the analysis of the fragmented learning ecology. This approach ensured that the sample captured not only hierarchical and departmental perspectives but also differences arising from employment status, which

proved central to understanding how organisational learning mechanisms were unevenly enacted across the hotel.

On average, interviews lasted 45 minutes and were conducted either in person at the hotel or via secure video conferencing, depending on participant availability. The semi-structured format allowed for flexibility while ensuring that key topics were explored in depth. The interview guide was designed to link directly to the study's theoretical propositions, in line with Yin (2018) recommendations, and addressed areas such as participants' understandings of sustainability, experiences of learning and knowledge sharing, the role and perceived effectiveness of formal and informal OLMs, barriers to sustainability-related learning, and the influence of leadership and organisational culture. All interviews were audio-recorded with informed consent, transcribed verbatim, and anonymised to maintain confidentiality. The combination of interview data, field observations, and organisational artefacts provided a comprehensive and triangulated understanding of how sustainability-related learning was embedded within the hotel's operations and culture.

4.3.3 Data analysis

All interview transcripts are read in full multiple times to develop deep familiarity with the context, and open coding is applied in NVivo to capture discrete learning interactions, practices, and reflections (Braun et al, 2022; Miles et al, 1994). The analysis adopted an abductive approach (Timmermans et al, 2012), combining theory-informed and inductive reasoning. The analysis follows a systematic, iterative process, combining thematic analysis with pattern matching, consistent with Yin (2018) recommendations for analytic rigour and with Beverland and Lindgreen's (2010) emphasis on methodological transparency and theoretical grounding. Given the study's aim to explore how sustainability-related organisational learning mechanisms are enacted, interpreted, and experienced, the coding process is structured around the OLM framework developed by Lipshitz et al. (2002), which was introduced in the literature review. This framework provides the foundation for identifying formal, informal, internal, and external learning mechanisms within hotel operations. While the coding draws on these sensitising concepts, it also remains open to the inductive

emergence of themes from the empirical data to ensure that unanticipated patterns and context-specific insights are captured. This analysis, provided broad analytical categories (e.g., internal vs. external; online vs. offline). Within these parameters, codes were generated inductively to capture how employees experienced, interpreted, and enacted sustainability learning. These patterns were iteratively refined and grouped into higher-order categories, such as “leadership modelling as learning integration” and “peer reinforcement of formal training.” Throughout this process, movement between data and theory enabled the identification of context-specific dynamics that both extended and challenged established OLM classifications.

Pattern matching is employed to assess alignment between anticipated OLMs behaviours and those observed in the field, consistent with Yin (2018) and Trochim (1989) recommendation for strengthening internal validity in qualitative case studies. For example, while the literature suggests that internal offline mechanisms (e.g., meetings) should be reinforced by internal online mechanisms (e.g., real-time peer feedback), the analysis identified instances where this reinforcement was absent, leading to fragmented practice. Negative case analysis is deliberately integrated to surface situations where OLMs are present but ineffective, resisted, or distorted, such as sustainability messages that failed to transfer across departments or were overridden by entrenched operational norms (Lincoln et al, 1985; Miles et al., 2014). By considering these counterexamples, the analysis refines theoretical propositions and generates richer, more nuanced explanations of how OLMs function, or fail to function, in a live hospitality setting.

4.3.4 Trustworthiness and case study rigour

Rigour is ensured through a layered strategy that aligns with both Yin (2018) quality criteria for case studies and Lincoln and Guba (1985) trustworthiness framework. Construct validity is strengthened through the triangulation of interviews, field notes, and organisational artefacts, allowing for cross-verification of how OLMs are described, observed, and embedded in physical or procedural forms (Denzin, 2017; Flick, 2022). Member reflections provide participants with the opportunity to confirm

or refine interpretations, particularly in relation to sensitive findings on leadership and cross-departmental communication (Birt et al., 2016).

Internal validity is supported through systematic pattern matching and explanation-building (Yin, 2018; Trochim, 1989), with explicit attention to rival explanations for observed OLMs behaviours. For instance, variations in the effectiveness of internal online mechanisms are not only linked to leadership style but also explored against alternative explanations such as time pressure or resource constraints. External validity is addressed through anchoring findings in the established OLMs theoretical framework, enabling the case to contribute to analytic generalisation rather than statistical representativeness (Yin, 2018).

Reliability is enhanced by maintaining a detailed case study database, including full transcripts, coding records, analytic memos, and reflexive notes that document the decision-making process at every stage (Miles et al., 2014). Reflexivity plays a central role in ensuring trustworthiness: the researcher kept a structured journal to critically examine positionality, potential assumptions, and the influence of prior professional experience in the hospitality sector on interpretation (Finlay, 2002; Berger, 2015). This reflexive discipline ensures that the representation of OLMs in the findings remains grounded in participants' accounts and the empirical reality of the case, rather than the researcher's preconceptions.

By integrating theoretical alignment, empirical triangulation, and reflexive transparency, the study offers a rigorous and credible account of how OLMs are operationalised, adapted, and, at times, undermined within the complex, high-pressure environment of an independently owned hotel. This approach not only strengthens the internal validity of the current case but also provides a methodologically robust foundation for extending OLMs theory within hospitality and other service-intensive sectors.

4.4 Findings

This section presents the findings on how sustainability-related organisational learning mechanisms were experienced within the case hotel. Rather than functioning as an integrated organisational system, learning unfolded as a fragmented learning ecology (FLE), in which knowledge flows were uneven and contingent on role, department and employment status. Seasonal employees, concentrated in back-of-house (BOH) departments, faced additional barriers due to limited induction and restricted access to communication channels, further reinforcing these divisions. The following sections explore five interrelated themes that illustrate how OLMs were enacted and constrained in practice within this FLE: employees' understanding of sustainability learning, the operation of OLMs, the role of leadership in reinforcing or undermining mechanisms, organisational barriers shaping the durability of learning and the challenges of unlearning unsustainable practices. Although the sample included employees from both chain and independent hotels, no significant differences were observed in how sustainability was understood or enacted across these organisational contexts. The findings therefore focus on shared patterns across hotel types.

4.4.1 Employees' understanding of sustainability learning

In hospitality research, employees' understanding of sustainability is often shaped by departmental roles, contract status and exposure to organisational communication (Baum, 2018; Weber et al., 2022). Organisational learning literature also highlights that fragmented access to knowledge produces uneven interpretations across roles (Billett, 2001).

BOH employees commonly interpreted sustainability in terms of compliance with operational rules rather than reflective understanding. As the head of housekeeping (P8) explained: *"It's mostly about remembering to turn things off, sort the bins, things like that."* Similarly, the housekeeping supervisor (P4) noted: *"We get told not to waste water or food, so we try to follow that. It's just part of the rules here."* A seasonal breakfast worker (P12) described learning by imitation rather than instruction: *"Sometimes, I just watch what others are doing with waste and copy that. Nobody really explains why; it's just the way it is."* Another seasonal kitchen employee (P13)

added: *“I haven’t had any session about sustainability.”* These accounts reveal a predominantly procedural and compliance-oriented approach to sustainability learning, shaped by hierarchical communication and limited reflective dialogue. This pattern reflects Baum (2018) critique of hospitality’s reliance on ‘tick-box’ sustainability and illustrates how limited communication and induction practices contributed to fragmented and surface-level understanding of sustainability amongst BOH staff.

Variation within BOH, however, emerged in the kitchen, where employees described broader and more reflective engagement with sustainability. The head chef (P3) highlighted the ethos of local sourcing: *“It’s part of what makes us different from chain hotels. We try to be local, seasonal and responsible, that’s the sustainability I’ve learnt here.”* Sustainability was also embedded in daily practices: *“We use every part of the meat, every part of the vegetables ... Kitchen porters and dishwashers are the most in tune because it’s up to them to make sure everything’s in the right place. We also do a debrief every day around 4 PM ... Recently, we did a menu revamp, focusing on keeping things as local as possible.”* (Head Chef, P3). Collaboration reinforced this sustainability practice further. A breakfast manager (P2) described: *“If I see there are still 25–30 sausages left and half an hour left for breakfast, I go to the kitchen and say, look, we have 20 more people coming in, don’t cook anymore. It goes like this every day ... Communication between departments is the most important thing to manage waste.”* Kitchen staff also noted that daily briefs served as an important space for reinforcing these practices *“Our morning briefings are really helpful. The head chef always reminds us about things like portion control and sorting food waste properly. It only takes a few minutes, but it keeps everyone on the same page.”* (Food & Beverage assistant P-24). These examples illustrate how the kitchen functioned as an outlier within the wider BOH structure, demonstrating more integrated, collaborative and reflective sustainability learning. Through daily debriefs, interdepartmental coordination and informal mentoring, sustainability became embedded in practice rather than imposed as a rule.

This situation contrasts sharply with that in other BOH departments, where limited induction and communication restricted opportunities for shared understanding and continuity of learning. The newly appointed head chef (P20) further reinforced and expanded these practices, illustrating how sustainability learning was sustained and operationalised through OLMs. Drawing on his background in international hotel chains, he described sustainability as *“our foundation, the direction we’re taking is to break the barriers of what sustainability means for smaller hotel groups.”* This perspective translated into practical mechanisms for knowledge generation and transfer. P20’s leadership also showed how learning could support inclusion and mentoring. *“Training has to be hands-on, step-by-step,”* he explained, describing how he adapted guidance for employees with disabilities and new recruits so *“everyone can take part and understand the why behind what we do.”* These examples show how the kitchen developed a more reflective and participatory learning culture compared with other BOH areas. Whilst such practices demonstrated deeper engagement with sustainability, they also highlighted the fragmented nature of learning across the hotel, where opportunities for shared understanding depended heavily on specific leaders and contexts rather than on systematic organisational processes.

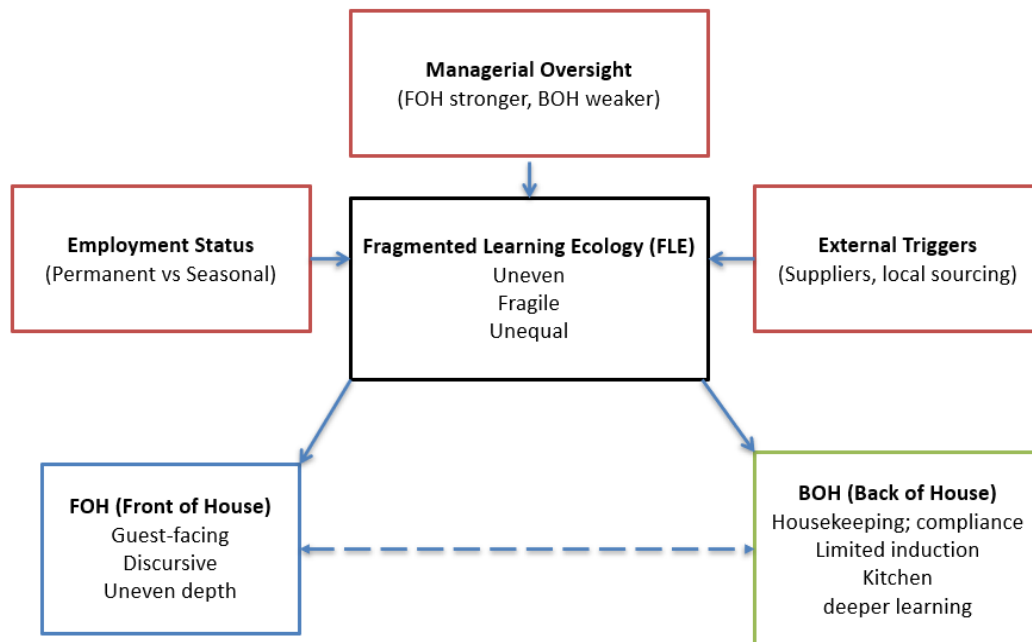
FOH employees framed sustainability through guest interaction and organisational communication. A receptionist (P1) explained: *“It’s definitely like a good selling point because we do have like our own energy centre¹ and even for the whisky, we pull out like the water from the river. And so I think it is a good selling point ... but some guests don’t particularly like [the changes] and they complain ... but we just have to say like we are sustainable.”* This condition shows how FOH employees performed sustainability discursively, justifying policies to guests. However, exposure was stratified. An intern (P14) reflected: *“I didn’t know much about sustainability before coming here ... Most of what I’ve learnt has been through guests asking questions.”* These accounts illustrate how FOH roles offered visibility but left junior or temporary employees reliant on scripts, whilst even senior employees felt that communication about sustainability lacked depth. The HR manager (P18) acknowledged this gap,

¹ Note: The hotel’s energy centre is a small on-site renewable facility that provides part of its heating and power. It is promoted in marketing materials as evidence of the hotel’s sustainability commitment, although most employees referred to it only superficially, without detailed technical understanding.

noting, “*We really need more training and awareness campaigns for staff, especially around sustainability. Right now, it’s not enough.*”

Across the hotel a consistent pattern emerged: learning processes within the hotel were active but disconnected. Formal OLMs offered structured opportunities to acquire sustainability knowledge but rarely adapted to the pace and variability of daily operations. Informal learning, while more flexible and socially embedded, remained localised within teams and dependent on individual initiative. External learning opportunities, such as supplier interactions or guest feedback, occasionally prompted reflection but lacked systematic integration into organisational routines. These fragmented processes meant that sustainability knowledge circulated unevenly across departments, often failing to consolidate into shared organisational understanding. To conceptualise these conditions, this study introduces the notion of a fragmented learning ecology, represented in Figure 1. The framework captures how diverse learning mechanisms coexist but remain insufficiently connected, leading to discontinuities that limit the institutionalisation of sustainability learning within hotel operations.

Figure 1: Fragmented Learning Ecology. This figure illustrates how uneven sustainability knowledge flows across FOH/BOH roles, employment types, and external influences.



Note: Orange boxes show structural factors; blue and green indicate FOH and BOH roles. Solid arrows represent strong knowledge flows; dashed arrows show weaker or fragmented exchanges.

4.4.2 Organisational learning mechanisms in a fragmented learning ecology

In the case of the hotel, organisational learning mechanisms operated unevenly across departments. Managers and permanent staff had greater access to updates and meetings, while seasonal and line-level employees relied on observation or peer guidance. These differences created gaps between front- and back-of-house teams, where time pressure and shift changes limited structured learning. As a result, knowledge sharing was active but fragmented, reflecting how OLMs functioned selectively within the hotel (Han et al., 2023; Lipshitz et al., 2002). For analytical clarity, formal and informal external OLMs are treated together here, as both operate through similar channels of outside influence on sustainability learning. The following subsections examine how formal, informal and external mechanisms operated in this ecology, showing how sustainability learning was constrained in practice and how more inclusive approaches might help overcome limitations. The findings suggest that sustainability learning within the hotel operates as a fragmented learning ecology, where learning mechanisms function unevenly across organisational roles and departments. This concept emerges from the empirical analysis as a way of explaining

how sustainability knowledge is distributed, interpreted, and enacted across the organisation.

4.4.3 Formal organisational learning mechanisms

In the case hotel, formal organisational learning mechanisms were largely campaign-driven and managerial in tone, designed to make sustainability visible but not necessarily embed it deeply across departments.

In BOH departments, formal initiatives were largely introduced through structured campaigns or top-down directives. For instance, the head of housekeeping (P8) recalled: *“Last year, we ran a “switch off and turn down” campaign to reduce heat and lighting in rooms.”* Similarly, the housekeeping supervisor (P4) explained: *“We reduced plastic in tea trays and guest rooms as part of the green policy.”* These examples highlight how campaigns signalled management’s commitment to sustainability and provided concrete actions for employees. Yet, the distribution of information was uneven. Seasonal workers were often excluded. A breakfast worker (P11) explained: *“When I joined, they just told me where to put the rubbish ... nothing else really about sustainability.”* Another seasonal employee member (P13) added: *“It’s usually just the basics at the start, like bins and recycling, but not much more after that.”* A newly appointed chef (P20) similarly described the absence of structured sustainability training, noting that *“It’s more about picking things up as you go ... You watch how others do things, but there’s no formal session.”* This description suggests that even senior or skilled recruits relied on informal observation rather than systematic induction, underscoring how formal OLMs were weakly institutionalised in BOH departments. As the hotel owner (P21) acknowledged, *“We get updates in our meetings, but it’s hard to always pass those on; sometimes, there’s just not enough time.”* This comment reveals how formal learning often stalled at the managerial level, with sustainability information failing to cascade effectively to frontline employees. In BOH, formal OLMs therefore reinforced a hierarchy of access: permanent managers received reports and updates, but seasonal and line-level employees were left with only basic rules. This practice created a compliance-oriented culture, where sustainability was understood as ‘house rules’ rather than as an organisational value.

FOH employees described somewhat greater access to formal sustainability communication, particularly during induction and in management updates. A front office reception employee (P1) reflected: *“We get some updates, especially when new policies come in, but it depends on who’s on shift ... Sometimes, you miss it.”* Likewise, a breakfast manager (P2) explained that *“New sustainability goals are sometimes mentioned during morning briefings, but if you start later, you don’t always hear them.”* These examples indicate that FOH employees had more structured opportunities to learn about sustainability than their BOH counterparts. However, even here, knowledge flows were incomplete. A reservation employee (P16) explained: *“I know the basics like recycling and reusing towels, but when guests ask more detailed questions, I can’t always answer.”* A general manager (P19) reinforced this point, observing that *“We talk about sustainability as part of our brand, but there isn’t really a system to make sure everyone knows the same message.”* This observation highlights a gap between the hotel’s external sustainability communication and the internal learning processes needed to sustain consistent understanding amongst employees. These accounts suggest that FOH employees were able to talk about sustainability with guests, but often without depth or consistency.

Overall, formal OLMs mirrored wider critiques of training in the service sector: often symbolic, short-lived or poorly diffused (Tews and Noe, 2019). By privileging managers and FOH employees over BOH and seasonal workers, these mechanisms reinforced structural divisions and limited sustainability learning to compliance-level actions (Filimonau et al., 2022). Ensuring that all employees, regardless of role or contract type, had equal access to sustainability updates and training would help move formal OLMs from symbolic gestures towards durable organisational practices. This goal could be achieved through practical measures such as introducing short pre-shift sustainability briefings for all employees, cascading simplified performance dashboards beyond management and displaying them in both FOH and BOH areas and adapting induction programmes so that seasonal employees receive structured sustainability training at the start of their contracts. Embedding these measures into routine operations would allow campaigns to evolve into continuous learning

processes and reduce the reliance on symbolic, one-off initiatives. These patterns reflected the dynamics of a complex learning environment (Goodyear et al, 2014), where overlapping routines, shifting schedules and fragmented communication created both opportunities and barriers for knowledge sharing across departments.

4.4.4 Informal organisational learning mechanisms

Informal organisational learning mechanisms often emerge through observation, imitation, role modelling and everyday dialogue, playing a critical role in how employees internalise practices in hospitality settings (Billett, 2001). Such mechanisms can foster adaptability and innovation but are highly dependent on local champions and workplace culture (Chan et al, 2016; Pham et al., 2019). Informal OLMs in the case hotel operated through role modelling, peer observation and adaptive responses to immediate challenges. These mechanisms were powerful in some contexts but fragile and uneven across the workforce.

In BOH departments, such as the kitchen, informal peer learning and leadership by example were central to embedding sustainability. The head chef (P3) explained: *“Even small changes can make a difference ... like reducing deliveries or finding uses for leftovers.”* The general manager (P19) echoed this emphasis on modelling, noting that *“People pay more attention to what you do than what you say; if managers don’t walk the talk, the team won’t either.”* These statements demonstrate how informal leadership behaviour shaped the diffusion of sustainability practices beyond formal directives. A newly appointed chef (P20) also described this culture of observation, explaining that *“You learn quickly by watching how the others handle waste or portioning ... Someone will correct you if you do it wrong, but there’s no formal talk about why it matters.”* This culture illustrates how informal feedback loops could help sustain daily efficiency but did little to encourage reflection on sustainability principles. Yet, seasonal workers emphasised how such flows rarely reached them. Another seasonal worker (P13) added: *“It’s more about watching and copying ... but if you don’t work long here, you don’t really get into it.”* In BOH, informal OLMs therefore depended heavily on individual champions. Where such figures were present, innovation and adaptation flourished; where they were absent, employees, especially

seasonal and lower-status workers, remained excluded, reinforcing the fragmented learning ecology.

In FOH, informal learning was often generated through observation, imitation and guest interactions. A concierge (P10) explained: *“You pick things up by listening to how colleagues explain things to guests ... After a whilst, you just copy the style.”* Likewise, a front office receptionist (P1) reflected: *“When new people start, they learn mostly by watching how others handle guests and what they say about the hotel’s sustainability ... There isn’t really a structured explanation”*. These accounts illustrate how informal learning occurred through socialisation and imitation, that is, routines were passed down experientially rather than through formal instruction. However, as one marketing manager (P9) observed, *“If you don’t explain the reason, people just repeat the routine ... They don’t actually learn.”* The event supervisor (P17) similarly reflected that *“The message is there, but not everyone tells it the same way ... It depends who’s on shift.”* This inconsistency highlights how informal learning in FOH was reactive and variable, reflecting the uneven circulation of sustainability knowledge across the team. In FOH, informal mechanisms encouraged adaptability and responsiveness; yet, without explicit reflection, sustainability knowledge often became performative, reduced to scripts or reactive adjustments rather than embedded values. In the FLE, this situation left FOH learning vulnerable to turnover and dependent on immediate interactions.

These dynamics support wider research that highlights the power and fragility of informal learning. Whilst informal learning can spread innovation and responsiveness, it often reinforces inequalities by privileging employees with access to strong role models or guest-facing opportunities (Kim et al., 2019). In fragmented learning ecologies, informal OLMs therefore act as double-edged mechanisms: enabling deep practice in some areas whilst leaving others disengaged or excluded. Strengthening informal OLMs in the case hotel would require deliberately designing peer-to-peer learning spaces, embedding reflection into daily routines across departments and ensuring seasonal and lower-status workers are actively included. This approach would

help transform informal learning from a fragile, uneven process into a more consistent and collective driver of sustainability practice.

4.4.5 External organisational learning mechanisms

External organisational learning mechanisms bring knowledge into organisations from outside sources such as suppliers, clients or industry networks (Binder, 2019). In hospitality, these external inputs can play a critical role in shaping sustainability practices, especially where internal mechanisms are weak or fragmented (Raub et al, 2019). However, external learning opportunities are often unevenly accessed across departments and job roles, reinforcing existing inequalities in knowledge distribution (Amis et al., 2020).

In the case hotel, suppliers were the most consistent source of external learning, especially within the kitchen. The head chef (P3) described how sustainability knowledge was introduced through direct supplier engagement: *“The fish supplier came in to explain seasonal catches and how that reduces environmental impact. That made me rethink menu planning.”* Similarly, the newly appointed head chef (P20) explained how supplier partnerships shaped learning and daily routines: *“We’ve restructured our deliveries so suppliers come twice a week instead of every day, which cuts our emissions and makes staff plan better”*. He added, *‘When our vegetable supplier explained crop rotation and waste reduction, the team started talking about how we could reuse offcuts for stocks.’* These examples illustrate how suppliers acted as Fragmented Learning Ecology, showing , translating abstract sustainability expectations into practical operational change. They show how knowledge flowed from external networks into the kitchen and stimulated reflective discussion, embodying the function of an external OLM.

However, such interactions were not widely shared across departments. Whilst kitchen staff engaged directly with suppliers, FOH and housekeeping employees remained detached from these exchanges. As one food and beverage assistant (P22) noted: *“We changed how we serve coffee and tea ... They told me it’s for sustainability, but they didn’t say why.”* This gap demonstrates how external knowledge was absorbed

selectively, reaching some employees through direct relationships whilst bypassing others entirely. In a fragmented learning ecology, this selective diffusion reinforced knowledge hierarchies and left large parts of the workforce disconnected from the rationale behind sustainability initiatives. These findings align with research showing that whilst external actors such as suppliers and industry partners can drive sustainability innovation, their impact depends on the organisation's capacity to translate external insights into shared internal learning (Pham et al., 2019).

Taken together, the operation of formal, informal and external mechanisms revealed a fragmented learning ecology in which access to sustainability knowledge depended on role, department and employment status. Formal mechanisms were more accessible to managers and FOH employees, informal learning was shaped by observation and local champions, and external mechanisms were concentrated in the kitchen through supplier engagement. As a result, sustainability learning developed unevenly across the hotel, with certain groups actively engaging in reflection and practice improvement, whilst others remained confined to routine, compliance-based actions.

4.4.6 Leadership as a reinforcing and integrative mechanism

The findings show that leadership plays a pivotal role in shaping how OLMs are embedded and sustained in practice. In hospitality, leaders are central to translating abstract sustainability goals into operational routines, framing meaning for employees and legitimising change (Gioia and Chittipeddi, 1991). Prior studies suggest that leadership style determines whether sustainability is perceived as strategic, cultural or merely symbolic (Williams et al., 2021). In the case hotel, the owner's leadership had historically been key to embedding sustainability as an operational and moral value. When she was active, employees described her as visible, inclusive and personally committed to sustainability. As she explained, "*I've always believed sustainability is about people as much as the planet — it's about how we treat each other, how we run the business fairly and how we respect the community that supports us.*" (Hotel owner, P21)

Her leadership created a participatory environment where employees across departments could contribute ideas. The room division manager (P15) recalled: “*We had a green team where anyone could suggest ideas, from the kitchen to reception. It made everyone feel part of something.*” Similarly, the head chef (P3) noted: “*She always wanted to know what the staff thought, not just managers. She believed sustainability was everyone’s job.*” Employees described these practices as inclusive and empowering, allowing them to connect sustainability to fairness and respect in everyday work.

This coherence, however, proved fragile. During the data collection period, the owner’s ill health and temporary withdrawal from management significantly disrupted this dynamic. The general manager (P19) explained: “*Without her, it’s been difficult to keep the same momentum. People still care, but it’s not pushed the same way anymore ... Without someone driving it, it gets forgotten.*” In her absence, structured sustainability discussions such as the green team and regular updates declined. Employees in BOH departments particularly noticed the loss of direction. The housekeeping supervisor (P4) stated: “*We still do recycling and follow the rules, but it’s not talked about anymore.*”

In FOH departments, where leadership visibility remained higher, sustainability discussions continued, though less consistently. The head concierge (P10) described: “*When higher-ups talk about it and let us share what we know, it gives us confidence to explain it to guests.*” However, the same participant noted that this practice depended on timing and shift patterns, meaning that not all employees received the same information.

Overall, leadership acted as a reinforcing and integrative mechanism when visible and engaged, aligning sustainability with shared values and collective learning. Its absence, however, exposed an overreliance on individual champions, leading to inconsistent communication and fragmented understanding across departments. Leadership thus functioned as a key pivot in the hotel’s learning ecology, capable of

uniting sustainability learning when present, yet contributing to fragmentation when withdrawn.

4.4.7 Challenges of unlearning unsustainable practices

Alongside adopting new practices, employees described persistent difficulties in unlearning entrenched habits that conflicted with sustainability goals. Organisational learning research has long emphasised that unlearning is not the mirror image of learning but a fragile and often more demanding process, requiring conscious effort to abandon old routines (Fiol et al, 2017; Mull et al., 2023). In the case hotel, these challenges emerged differently across BOH and FOH, reflecting the combined pressures of operational routines and guest-facing performance.

In BOH departments, time pressure and ingrained habits frequently undermined efforts to change. The housekeeping supervisor (P4) explained: *“Housekeepers have quotas for cleaning rooms, so sometimes separating rubbish can be challenging.”* A seasonal breakfast worker (P13) similarly reflected: *“When it’s very busy, making sure you put everything in the right bin ... you might just put it in the wrong one by accident.”* These accounts highlight how the intensity of service encouraged employees to revert to faster, familiar routines. Cost and supplier relationships added further inertia. As the head of housekeeping (P8) noted: *“The greener products are three times more expensive ... We try, but keeping costs down is the main challenge.”* Such examples show that BOH employees were not resisting change but were constrained by structural conditions, workload intensity, budgets and supplier lock-in, which made unlearning particularly fragile.

In FOH, the difficulties of unlearning were shaped less by operational shortcuts and more by guest expectations and communication habits. An event supervisor (P17) admitted: *“Sometimes, a client insists on the old way, and you just do it, even if it goes against the new guidelines.”* Moreover, an intern (P14) acknowledged: *“I still use the same lines I was shown at the start ... Even when they update things, most of us just keep saying what we learnt first because it’s easier.”* These reflections reveal the stickiness of discursive routines, in which scripts learnt early became hard to shift even

when new information was introduced. The HR manager (P18) confirmed this tendency: *“Unless managers remind people or explain why, staff tend to fall back on the old scripts with guests.”* In FOH, therefore, the main challenge was not physical routines but the difficulty of breaking discursive patterns reinforced by customer demands.

In sum, these findings demonstrate that unlearning was systematically harder than learning. Whilst campaigns, supplier input or leadership initiatives could introduce new practices, older habits resurfaced quickly under pressure. As Fiol et al (2017) emphasise, unlearning requires deliberate reinforcement and opportunities for sense-making, conditions that were largely absent in the fragmented learning ecology of the case hotel. Without systemic support, such as protected time for reflection, consistent leadership reinforcement and communication strategies that legitimise new norms with guests, unlearning remained partial and fragile, leaving sustainability initiatives vulnerable to erosion and reversal. These patterns suggest that improving sustainability performance in hotels depends less on adding isolated training modules and more on redesigning the learning ecology, namely, who gets what knowledge, when and through which reinforcing mechanisms.

4.5 Discussion

This study set out to explore how sustainability-related organisational learning mechanisms are enacted in a hotel context and to introduce the concept of a fragmented learning ecology as a way of capturing how sustainability knowledge is distributed unevenly across departments, roles, and employment statuses. The findings reveal that, rather than functioning as a cohesive system, OLMs operated unevenly across FOH and BOH, with seasonal and junior employees often excluded from meaningful engagement. Leadership, workload pressures, and guest expectations further shaped whether sustainability practices were embedded or reduced to compliance, while entrenched habits proved difficult to unlearn.

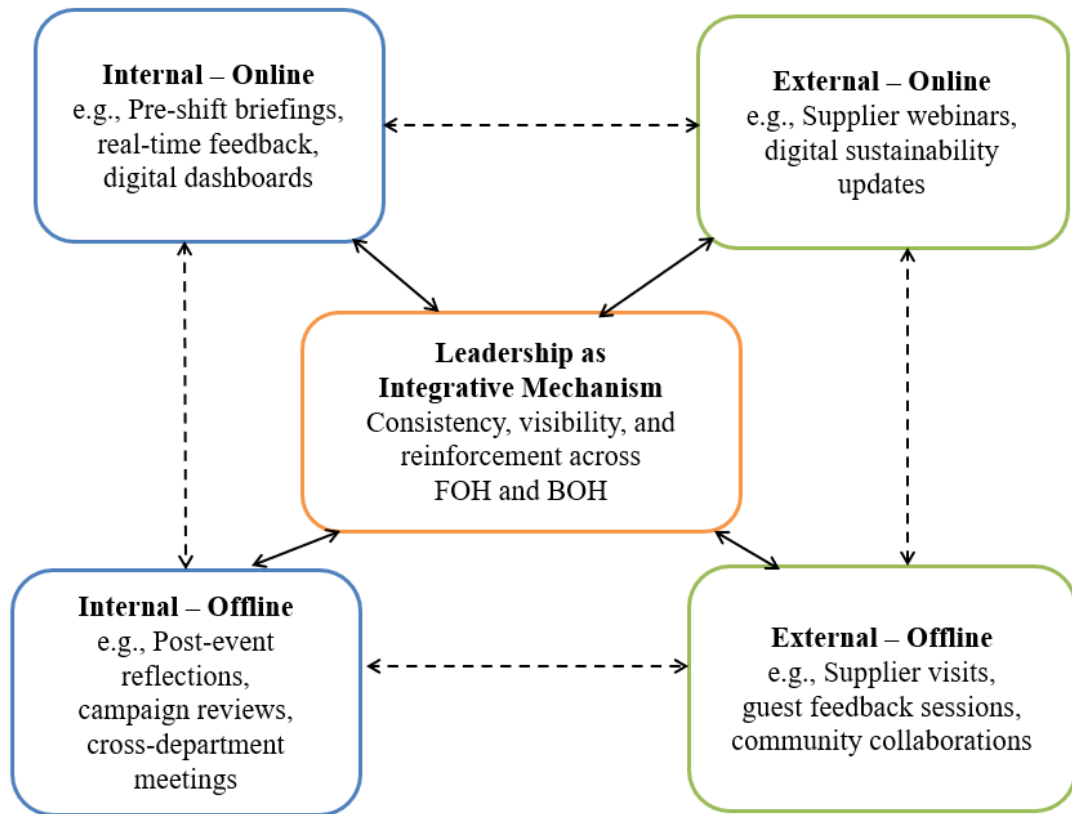
Drawing on Lipshitz et al.’s (2006) framework, OLMs can be understood as four interdependent types, internal/external and online/offline, that together determine how

learning becomes institutionalised. However, in fragmented ecologies such as the case hotel, these mechanisms often function in isolation. The discussion therefore develops a framework for operationalising OLMs within fragmented contexts, showing how leadership, communication flows, and structural inclusivity can reconnect these mechanisms into a cohesive learning system. Together, these insights carry significant theoretical and practical implications.

4.5.1 A framework for overcoming fragmentation

Building on Lipshitz et al.'s (2006) fourfold typology of organisational learning mechanisms distinguishing between internal/external and online/offline processes, this study proposes a framework for overcoming the fragmented learning ecology observed in the case hotel (see Figure 2). The findings suggest that fragmentation is not the result of an absence of mechanisms but of their disconnection: learning processes operate in parallel, with limited reinforcement across hierarchical and departmental boundaries. To address this, the framework conceptualises sustainability learning as an *integrated ecology*, where mechanisms interact dynamically rather than functioning as isolated systems.

Figure 2: Framework for strengthening organisational learning mechanisms to overcome the fragmented learning ecology.



*Note: The central orange box represents leadership as the integrative mechanism linking the four OLM types: internal/external and online/offline (blue and green boxes). **Solid arrows indicate leadership-enabled coordination and reinforcement across mechanisms**, demonstrating how learning processes are aligned and sustained across front-of-house (FOH) and back-of-house (BOH) operations. **Dashed arrows represent the circulation and exchange of sustainability knowledge between mechanisms**, capturing both formal and informal flows through which knowledge is shared, adapted, and reinforced across organisational boundaries, including interactions between internal practices and external stakeholders. Together, these connections illustrate how sustainability learning emerges through continuous interaction, feedback, and knowledge transfer rather than linear processes.*

Internal online mechanisms (such as real-time peer feedback and team briefings) provide the connective tissue linking seasonal and permanent employees, allowing sustainability learning to occur within the flow of daily operations rather than as retrospective correction. Internal offline mechanisms (including audits, reviews, and campaigns) should be designed as participatory rather than managerial exercises, ensuring that sustainability knowledge is distributed laterally across departments and contract types.

External online mechanisms (such as guest feedback or supplier input during service) can become entry points for collective reflection, translating external interactions into internal learning moments that reshape routines. External offline mechanisms (including supplier workshops and regulatory updates) should extend beyond managerial circles to include both FOH and BOH staff, transforming selective exposure into collective understanding.

Together, these four domains form a *reinforcing system of learning flows* in which sustainability knowledge circulates both horizontally (across FOH and BOH) and vertically (across hierarchical levels). As shown in Figure 2, leadership functions as the integrative mechanism at the centre of this system, bridging ecological divides and sustaining alignment across mechanisms. Rather than introducing new learning structures, leaders strengthen the interdependence of existing ones by embedding inclusive communication, feedback loops, and opportunities for reflection within routine operations.

This framework advances organisational learning theory by operationalising how OLMs can be realigned to function cohesively within fragmented environments. It also contributes to sustainability scholarship in hospitality by moving beyond the emphasis on training provision to a more systemic understanding of how learning architectures, when reinforced through leadership and communicative connectivity, can institutionalise sustainable practice within complex service settings.

4.5.2 Theoretical Implications

This study contributes to organisational learning and sustainability literature in several important ways.

First, by applying the OLMs framework to the hospitality sector, it extends understanding of how learning processes operate in a service-intensive, high-turnover context. Prior research often treats OLMs as cohesive systems that generate, share, and retain knowledge evenly across the organisation (Hermelingmeier and von Wirth,

2021; Lipshitz et al., 2002). The findings here challenge this assumption by demonstrating that OLMs in hotels are inherently fragmented, shaped by structural divides between FOH and BOH, as well as by the precarious status of seasonal employees. In doing so, the study develops the concept of a Fragmented Learning Ecology, showing how sustainability knowledge circulates unevenly across roles and is often contingent on local champions, guest interactions, or external suppliers. This concept offers a more critical and nuanced framework for examining organisational learning in people intensive service sectors such as hospitality, highlighting fragility and partiality where cohesion is often assumed.

Second, the study adds to debates on the operationalisation of organisational learning by demonstrating the importance of linking learning and unlearning. While much OL literature focuses on the acquisition and institutionalisation of new knowledge (Martínez-Martínez et al., 2023; Easterby-Smith et al, 2011; Crossan et al., 1999), the findings show that sustainability also requires the abandonment of entrenched routines, such as cost-driven supplier relationships or guest-service scripts that conflict with environmental practices. In the case hotel, unlearning was systematically harder than learning, often undermined by time pressure, turnover, or guest demands. This supports Fiol and O'Connor's (2017) argument that unlearning is a fragile, resource-intensive process and extends it by illustrating how organisational conditions, such as service intensity and employment precarity, further complicate unlearning in organisations.

Third, the study advances hospitality research by foregrounding the role of structural inequalities in access to learning. While previous work notes that training and sustainability initiatives often remain symbolic (Dzhengiz, 2020), the findings specify how inequalities of role, contract type, and departmental status shape who gains meaningful sustainability knowledge. Seasonal workers in BOH, for instance, received only minimal instruction, often reduced to "house rules," while permanent FOH employees were more likely to access discursive knowledge through management and guest interactions. By conceptualising these differences as a Fragmented Learning Ecology, the study highlights how learning ecologies are not neutral but structured by

power, hierarchy, and contract status, echoing broader organisational learning debates on inequality (Field, 2020; Maclean et al., 2023). This moves the discussion of hotel sustainability beyond training provision and towards a more critical consideration of how structural features of hospitality work shape learning outcomes.

Finally, this study extends the sustainable hotels literature by providing an organisational learning lens through which to understand how sustainability knowledge is embedded, or fails to be embedded, in daily operations. Much of the existing research in sustainable hospitality focuses on environmental management systems, certification schemes, or behavioural training (Dzhengiz, 2020), often assuming that once such systems are in place, sustainable practices will follow. However, these approaches rarely account for *how* knowledge moves between departments or *why* it stalls at particular organisational levels. This study addresses that gap by showing that sustainability integration depends not only on the design of learning initiatives but also on the ecology of knowledge distribution that supports or constrains their operation. By linking OLMs with the concept of a Fragmented Learning Ecology, this research provides a new theoretical perspective for understanding why sustainability efforts in hotels often remain symbolic or unevenly enacted.

4.5.3 Managerial Implications

For practitioners, the findings highlight that embedding sustainability requires rethinking how learning is organised, communicated, and reinforced across the workforce.

First, managers must recognise that sustainability learning is unevenly distributed. Campaigns, audits, or awareness programmes often reach managers and FOH staff more than BOH or seasonal employees, reinforcing divisions. Hotels need to design more inclusive systems, such as pre-shift briefings, visible dashboards in both FOH and BOH, and structured inductions for seasonal employees, that ensure sustainability information circulates across all departments and contract types.

Second, leadership is a critical reinforcing mechanism. When leaders model behaviours, explain rationales, and create ongoing dialogue, employees engage with sustainability as a meaningful practice rather than a compliance exercise. Conversely, when leadership attention fades, sustainability initiatives quickly lose momentum. Hotels should therefore invest in equipping managers and supervisors to act as translators of sustainability, not only enforcing rules but framing their purpose and value.

Third, managers need to account for the challenges of unlearning. Employees often revert to old routines under pressure, whether discursive scripts with guests or operational shortcuts in BOH. Supporting unlearning requires not only new rules but structured opportunities for reflection and reinforcement. Cross-departmental debriefings, peer-mentoring schemes, and recognition systems that reward sustainable innovations can help employees abandon entrenched practices and normalise new ones.

Finally, managers should leverage external actors more systematically. Suppliers, clients, and guests bring valuable sustainability insights, but these currently enrich only certain departments. Hotels can act as brokers of this knowledge by inviting suppliers to lead multi-departmental sessions, integrating guest feedback into collective reviews, and translating regulatory updates into accessible communication for all employees. In sum, the managerial challenge is not only to expand training or awareness but to redesign the organisational conditions under which sustainability knowledge circulates. By embedding learning into daily routines, addressing inequalities of access, and reinforcing unlearning as much as learning, hotels can move beyond symbolic gestures to build sustainability practices that are resilient, inclusive, and durable.

4.6 Limitations and Future Research

This study has several limitations that also create opportunities for future research. First, the research is based on a single case study of an independently owned hotel in Scotland. While this design provided deep, contextualised insights into organisational

learning mechanisms and the fragmented learning ecology, the findings cannot be statistically generalised. Future research could employ comparative or multi-case studies across different types of hotels (e.g., chains, budget, luxury) or geographic contexts to examine whether similar patterns of fragmentation and uneven knowledge flows occur more broadly in the hospitality sector.

Second, the study relied primarily on interviews supported by field notes and limited documentary evidence. Access to confidential organisational records, such as training manuals or sustainability performance reports, was restricted. While triangulation enhanced credibility, future research could integrate richer documentary evidence and observational studies of everyday work practices to provide a more comprehensive account of how learning is enacted and constrained.

Third, the study provides a cross-sectional snapshot of sustainability learning at one moment in time. Organisational learning and unlearning are dynamic processes shaped by turnover, leadership changes, and external pressures such as regulation or market expectations. A longitudinal approach would enable future research to capture how sustainability knowledge evolves, is reinforced, or decays over time, particularly in response to leadership continuity or the introduction of new sustainability technologies.

Fourth, although the sample was diverse across departments and roles, it still reflects self-reported experiences of employees within a single organisational context. Perspectives from external stakeholders such as suppliers, local community actors, or regulators were only indirectly represented. Future studies could adopt a broader ecosystem perspective, examining how external relationships shape sustainability learning within hotels and whether OLMs can bridge boundaries across organisations.

Finally, this study introduced the concept of a Fragmented Learning Ecology to describe how sustainability knowledge is unevenly distributed across roles, departments, and employment statuses. While useful in highlighting fragility and partiality in knowledge flows, the concept requires further exploration and refinement.

Future research could operationalise the FLE framework in survey-based or mixed-methods studies, exploring its relevance in other service-intensive industries beyond hospitality. This would extend understanding of how fragmentation affects the durability of organisational learning in sustainability transitions.

4.7 References

- AMIS, J. M., MAIR, J. & MUNIR, K. A. 2020. The organizational reproduction of inequality. *Academy of Management Annals*, 14, 195-230.
- ANAND, A., SHANTAKUMAR, V. P., MUSKAT, B., SINGH, S. K., DUMAZERT, J.-P. & RIAHI, Y. 2023. The role of knowledge management in the tourism sector: a synthesis and way forward. *Journal of Knowledge Management*, 27, 1319-1342.
- ANTONACOPOULOU, E. P. 2006. The relationship between individual and organizational learning: New evidence from managerial learning practices. *Management Learning*, 37, 455-473.
- ARGOTE, L. & MIRON-SPEKTOR, E. 2011. Organizational learning: From knowledge experience. *Organisation Science*, 22, 1123-1137.
- ARGYRIS, C. (1996). *Organizational learning II: Theory, method, and practice*. Addison-Wesley, Reading, MA.
- ARGYRIS, C. & SCHÖN, D. A. 1997. Organizational learning: A theory of action perspective. *Reis*, 345-348.
- ASANTE, K. 2024. Hotels' green leadership and employee pro-environmental behaviour, the role of value congruence and moral consciousness: evidence from symmetrical and asymmetrical approaches. *Journal of Sustainable Tourism*, 32, 1370-1391.
- BAAH, C., JIN, Z. & TANG, L. 2020. Organizational and regulatory stakeholder pressures friends or foes to green logistics practices and financial performance: investigating corporate reputation as a missing link. *Journal of Cleaner Production*, 247, 119125.
- BARNETT, R. & JACKSON, N. (2019). *Ecologies for learning and practice: Emerging ideas, sightings, and possibilities*. Routledge, London.
- BARRON, B. 2006. Interest and self-sustained learning as catalysts of development: A learning ecology perspective. *Human development*, 49, 193-224.
- BASTEN, D. & HAAMANN, T. 2018. Approaches for organizational learning: A literature review. *Sage Open*, 8, 2158244018794224.
- BAUM, T. 2015. Human resources in tourism: Still waiting for change?—A 2015 reprise. *Tourism Management*, 50, 204-212.

- BAUM, T. 2018. Sustainable human resource management as a driver in tourism policy and planning: a serious sin of omission? *Journal of Sustainable Tourism*, 26, 873-889.
- BAUM, T. & HAI, N. T. T. 2019. Applying sustainable employment principles in the tourism industry: righting human rights wrongs? *Tourism Recreation Research*, 44, 371-381.
- BENN, S., EDWARDS, M. & WILLIAMS, T. (2014). *Organizational change for corporate sustainability*. Routledge, London.
- BERGER, R. 2015. Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative research*, 15, 219-234.
- BEVERLAND, M. & LINDGREEN, A. 2010. What makes a good case study? A positivist review of qualitative case research published in *Industrial Marketing Management*, 1971–2006. *Industrial Marketing Management*, 39, 56-63.
- BILLETT, S. 2001. Learning through work: workplace affordances and individual engagement. *Journal of Workplace Learning*, 13, 209-214.
- BINDER, P. 2019. A network perspective on organizational learning research in tourism and hospitality: A systematic literature review. *International Journal of Contemporary Hospitality Management*, 31, 2602-2625.
- BIRT, L., SCOTT, S., CAVERS, D., CAMPBELL, C. & WALTER, F. 2016. Member checking: a tool to enhance trustworthiness or merely a nod to validation? *Qualitative health research*, 26, 1802-1811.
- BOESKE, J. 2023. Leadership towards sustainability: a review of sustainable, sustainability, and environmental leadership. *Sustainability*, 15, 12626.
- BOON, B. 2007. Working within the front-of-house/back-of-house boundary: Room attendants in the hotel guest room space. *Journal of Management & Organization*, 13, 160-174.
- BRAUN, V. & CLARKE, V. 2022. Conceptual and design thinking for thematic analysis. *Qualitative Psychology*, 9, 3.
- CHAN, E. S. & HSU, C. H. 2016. Environmental management research in hospitality. *International Journal of Contemporary Hospitality Management*, 28, 886-923.
- CHUA, B.-L. & HAN, H. 2022. Green hotels: The state of green hotel research and future prospects. *Journal of Travel & Tourism Marketing*, 39, 465-483.

- CROSSAN, M. M., LANE, H. W. & WHITE, R. E. 1999. An organizational learning framework: From intuition to institution. *Academy of Management Review*, 24, 522-537.
- DENZIN, N. K. (2017). *The research act: A theoretical introduction to sociological methods*. Routledge, London.
- DREDGE, D., AIREY, D. & GROSS, M. J. (2015). *The Routledge handbook of tourism and hospitality education*. Routledge, Abingdon
- DZHENGIZ, T. 2020. A literature review of inter-organizational sustainability learning. *Sustainability*, 12, 4876.
- EASTERBY-SMITH, M. & LYLES, M. A. (2011). *Handbook of organizational learning and knowledge management*. John Wiley & Sons, Chichester.
- ELKJAER, B. 2004. Organizational learning: the 'third way'. *Management learning*, 35, 419-434.
- FIELD, L. 2020. Organisational learning: basic concepts. *Understanding adult education and training*. Routledge.
- FILIMONAU, V., MATUTE, J., MIKA, M., KUBAL-CZERWIŃSKA, M., KRZESIWO, K. & PAWŁOWSKA-LEGWAND, A. 2022. Predictors of patronage intentions towards 'green' hotels in an emerging tourism market. *International Journal of Hospitality Management*, 103, 103221.
- FINLAY, L. 2002. Negotiating the swamp: the opportunity and challenge of reflexivity in research practice. *Qualitative Research*, 2, 209-230.
- FIOL, M. & O'CONNOR, E. 2017. Unlearning established organizational routines—part I. *The Learning Organization*, 24, 13-29.
- FLICK, U. (2022). *An introduction to qualitative research*. Sage, London.
- GIOIA, D. A. & CHITTIPEDDI, K. 1991. Sensemaking and sensegiving in strategic change initiation. *Strategic Management Journal*, 12, 433-448.
- GOODYEAR, P. & CARVALHO, L. (2014). *The architecture of productive learning networks*. Routledge, Abingdon
- GOODYEAR, P. & CARVALHO, L. (2019). *The analysis of complex learning environments*. Routledge, London.

- GULAKDENIZ, E. & KARADAS, G. 2024. The impact of employees' perceptions regarding hotels' green intellectual capital on their environmental perceptions: A mediating moderation model. *Heliyon*, 10.
- HAN, J. W., NGUYEN, T. T. M., HUA, S. M. & PHAM, T.-H. 2023. Organizational learning through training effectiveness: evidence from the hospitality industry in Vietnam. *The Learning Organization*, 30, 532-553.
- HERMELINGMEIER, V. & VON WIRTH, T. 2021. The nexus of business sustainability and organizational learning: A systematic literature review to identify key learning principles for business transformation. *Business Strategy and the Environment*, 30, 1839-1851.
- IŞIK, C., AYDIN, E., DOGRU, T., REHMAN, A., ALVARADO, R., AHMAD, M. & IRFAN, M. 2021. The nexus between team culture, innovative work behaviour and tacit knowledge sharing: Theory and evidence. *Sustainability*, 13, 4333.
- KHAN, K., SHAMS, M. S., KHAN, Q., AKBAR, S. & NIAZI, M. M. 2022. Relationship among green human resource management, green knowledge sharing, green commitment, and green behavior: A moderated mediation model. *Frontiers in Psychology*, 13, 924492.
- KIM, Y. H., BARBER, N. & KIM, D.-K. 2019. Sustainability research in the hotel industry: Past, present, and future. *Journal of Hospitality Marketing & Management*, 28, 576-620.
- KLEEFSTRA, A., ALTAN, M. & STOFFERS, J. 2020. Workplace learning and organisational performance in the hospitality industry. *International Hospitality Review*, 34, 173-186.
- LINCOLN, Y. S. & GUBA, E. G. (1985). *Naturalistic inquiry*. Sage, Beverly Hills, CA.
- LIPSHITZ, R., FRIEDMAN, V. & POPPER, M. (2006). *Demystifying organizational learning*. Sage, London.
- LIPSHITZ, R., POPPER, M. & FRIEDMAN, V. J. 2002. A multifacet model of organizational learning. *The Journal of Applied Behavioural Science*, 38, 78-98.
- MACLEAN, M., APPIAH, M. K. & ADDO, J. F. 2023. How organizational learning dimensions influence firms' competitive strategy and performance in a lower-

- middle-income country: A mediation model. *Cogent Business & Management*, 10, 2256073.
- MARSICK, V. J. & WATKINS, K. (2015). *Informal and incidental learning in the workplace*. Routledge, London.
- MARTÍNEZ-MARTÍNEZ, A., CEGARRA-NAVARRO, J.-G. & GARCIA-PEREZ, A. 2023. Sustainability knowledge management and organisational learning in tourism: Current approaches and areas for future development. *Knowledge Management, Organisational Learning and Sustainability in Tourism*, 1-13.
- MENSAH, I. & AMPOFO, E. T. 2021. Effects of managers' environmental attitudes on waste management practices in small hotels in Accra. *International Hospitality Review*, 35, 109-126.
- MILES, M. B. & HUBERMAN, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage, Thousand Oaks, CA.
- MILES, M. B., HUBERMAN, A. M. & SALDAÑA, J. (2014). *Qualitative data analysis: A methods sourcebook*. Sage, Thousand Oaks, CA.
- MULL, M., DUFFY, C. & SILBERMAN, D. 2023. Forgetting to learn and learning to forget: the call for organizational unlearning. *European Journal of Training and Development*, 47, 586-598.
- ORIADE, A., OSINAIKE, A., ADUHENE, K. & WANG, Y. 2021. Sustainability awareness, management practices and organisational culture in hotels: Evidence from developing countries. *International Journal of Hospitality Management*, 92, 102699.
- PATTON, M. Q. 2014. *Qualitative research & evaluation methods: Integrating theory and practice*.
- PHAM, N. T., TUČKOVÁ, Z. & JABBOUR, C. J. C. 2019. Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behavior in hotels? A mixed-methods study. *Tourism Management*, 72, 386-399.
- POPOVA-NOWAK, I. V. & CSEH, M. 2015. The meaning of organizational learning: A meta-paradigm perspective. *Human Resource Development Review*, 14, 299-331.

- RAUB, S. P. & MARTIN-RIOS, C. 2019. "Think sustainable, act local"—a stakeholder-filter-model for translating SDGs into sustainability initiatives with local impact. *International Journal of Contemporary Hospitality Management*, 31, 2428-2447.
- RAZALI, M. Z. M. & JAMIL, R. 2023. Sustainability learning in organizations: Integrated model of learning approaches and contextual factors. *SAGE Open*, 13, 21582440231155390.
- ROBINSON, R. N., MARTINS, A., SOLNET, D. & BAUM, T. 2019. Sustaining precarity: Critically examining tourism and employment. *Journal of Sustainable Tourism*.
- SANGRÁ, A., RAFFAGHELLI, J. E. & GUITERT-CATASÚS, M. 2019. Learning ecologies through a lens: Ontological, methodological and applicative issues. A systematic review of the literature. *British Journal of Educational Technology*, 50, 1619-1638.
- SCHÖNHERR, S., ELLER, R., KALLMUENZER, A. & PETERS, M. 2023. Organisational learning and sustainable tourism: the enabling role of digital transformation. *Journal of Knowledge Management*, 27, 82-100.
- STAKE, R. E. (1995). *The art of case study research*. Sage, Thousand Oaks, CA.
- TEWS, M. J. & NOE, R. A. 2019. Does training have to be fun? A review and conceptual model of the role of fun in workplace training. *Human Resource Management Review*, 29, 226-238.
- TIMMERMANS, S. & TAVORY, I. 2012. Theory construction in qualitative research: From grounded theory to abductive analysis. *Sociological Theory*, 30, 167-186.
- TREVISAN, L. V., LEAL FILHO, W. & PEDROZO, E. Á. 2024. Transformative organisational learning for sustainability in higher education: A literature review and an international multi-case study. *Journal of Cleaner Production*, 447, 141634.
- TROCHIM, W. M. 1989. An introduction to concept mapping for planning and evaluation. *Evaluation and Program Planning*, 12, 1-16.
- WEBER, C. E., KORTKAMP, C., MAURER, I. & HUMMERS, E. 2022. Boundary work in response to professionals' contextual constraints: Micro-strategies in interprofessional collaboration. *Organization Studies*, 43, 1453-1477.

- WILLIAMS, T., EDWARDS, M., ANGUS-LEPPAN, T. & BENN, S. 2021. Making sense of sustainability work: A narrative approach. *Australian Journal of Management*, 46, 740-760.
- YAZAN, B. 2015. Three approaches to case study methods in education: Yin, Merriam, and Stake.
- STAKE, R. E. (1995). *The art of case study research*. Sage, Thousand Oaks, CA.

**Chapter V- Summary of
Theoretical and Managerial
Contributions**

5.1 Introduction

As sustainability expectations intensify across the hospitality sector, understanding how sustainable practices become embedded within hotel operations is becoming increasingly important. Employees are central to this process: they interpret sustainability expectations, balance them with operational pressures, and ultimately determine how sustainability is enacted and sustained in everyday work. The findings of this thesis show that sustainability embedding emerges through the way employees engage with sustainability, draw on different forms of sustainability knowledge, and participate in learning processes within the flow of hotel routines. These employee-mediated mechanisms operate within fast-paced and demanding environments where sustainability must continually compete with guest needs, time constraints, and service priorities. By demonstrating how engagement, knowledge, and learning shape whether sustainability is noticed, understood, and incorporated into daily practice, this thesis challenges the assumption that embedding sustainability is primarily the outcome of formal policies or managerial directives. Instead, it reveals sustainability embedding as a dynamic organisational process that unfolds through employees' everyday judgements, interactions, and learning experiences. This chapter summarises the main theoretical contributions.

5.2 Theoretical Contributions

The overarching aim of this thesis is to explore how sustainability becomes embedded as an organisational process in hotels by examining the employee-mediated mechanisms that translate stated commitments into consistent everyday practice. This is foregrounded in the lack of research into how sustainability is enacted in the everyday reality of hotel operations (Knezevic Cvelbar et al., 2024), and the limited attention paid to the lived experience of employees in this process (Filimonau et al., 2021; Ioannides et al., 2021). This thesis contributes to this literature by recognising the centrality of employees in the embedding of sustainability within hotel operations (Baum, 2018; Filimonau et al., 2021; Ioannides et al., 2021). Whereas much existing work has centred on managerial systems, certifications and customer responses (Han, 2021; Nimri et al., 2020; Loureiro et al., 2022), employees have typically been positioned as implementers of pre-designed initiatives rather than as organisational

actors who actively shape how sustainability unfolds in practice (Raza et al, 2022, Kim et al., 2019). By placing employees at the centre of analysis, this thesis moves beyond these conventional perspectives and provides a theoretically grounded explanation of how sustainability is enacted within the lived, dynamic reality of hotel work. Although extant research has demonstrated that formal commitments and organisational policies don't necessarily translate into routine practice (Robertson et al, 2017; Baum, 2018), it doesn't identify why this happens or what could rectify this problem. Each of the papers forming the body of this thesis contributes to the extant literature by addressing these two pertinent questions.

The first contribution of this thesis advances engagement theory by demonstrating that engagement with sustainability is not a stable psychological state, as is commonly assumed in the literature (Kahn, 1990; Saks, 2006), but a dynamic process that shifts in response to the operational realities of hotel work. While existing research links engagement to pro-environmental behaviour (Kim et al., 2019; Paillé et al., 2014), it pays limited attention to how engagement is expressed under the fluctuating demands, time pressure and service expectations that characterise hospitality work (Baum, 2018). This extends existing perspectives by showing that employees' engagement with sustainability is not fixed but varies according to their ongoing evaluations of what is possible within the flow of daily work. A key insight is the central role of emotional engagement: employees who feel personally committed to sustainability demonstrate a stronger inclination to initiate and maintain sustainable practices, yet this commitment is expressed selectively rather than uniformly. The findings therefore reposition engagement as a situational and context-dependent process, moving beyond individual-level accounts to explain how employees judge the feasibility of sustainable action in real time. This contribution demonstrates that motivation alone does not guarantee action (Paillé et al., 2014). Engagement translates into practice only when employees perceive sustainability as achievable within their immediate working environment. This provides a more precise explanation of how engagement functions as an employee-mediated mechanism. In doing so, this contribution advances the thesis aim by showing that sustainability becomes embedded when employees' engagement aligns with the organisational and contextual conditions that shape their

actions, revealing the employee-level processes through which sustainability is sustained in everyday hotel practice.

The second contribution to the research aim identifies relational and uneven distribution of sustainability knowledge within hotels. The findings show that knowledge frequently remains localised within certain teams or individuals, constrained by departmental boundaries, shift patterns and staff turnover. Prior work highlights the importance of sustainability competencies (Martínez-Martínez et al., 2023). This thesis demonstrates that the ability of knowledge to travel across departments and hierarchical levels is essential for sustaining practice (Baum et al., 2019); when knowledge remains isolated, sustainability initiatives weaken over time despite individual awareness. This contributes to theory by positioning sustainability knowledge as an organisational and relational process (Martínez-Martínez et al., 2023), clarifying why hotels struggle to convert individual understanding into collective and enduring sustainable practice, as mentioned by Filimonau et al. (2021). This insight offers a more dynamic and organisationally grounded conceptualisation of sustainability knowledge. In doing so, this contribution shows that embedding sustainability requires not only the presence of knowledge, but organisational environments that enable its timely, shared and context-sensitive application across everyday hotel practice.

Paper 2 also advances theoretical understanding of sustainability knowledge in hotel operations by demonstrating that knowledge does not directly or consistently translate into sustainable action. Existing frameworks conceptualise sustainability knowledge as a set of internalised competencies, declarative, procedural, effectiveness and social knowledge (Kaiser and Fuhrer, 2003), that individuals can draw upon as needed. The findings challenge this assumption by showing that even when employees have certain levels of sustainable knowledge, they activate it selectively, judging whether its use is appropriate, feasible and meaningful within the unfolding demands of daily work. Theoretically, this reframes sustainability knowledge as situational and context-responsive rather than a stable individual resource (Martínez-Martínez et al., 2023), helping to explain why knowledge alone is an unreliable predictor of sustainable

behaviour in hospitality settings. The thesis further extends knowledge theory by identifying a temporal dimension to the use and sharing of sustainability knowledge. Employees emphasised that knowing *when* to act, communicate or intervene is as important as knowing *how* to act sustainably. In fast-paced service environments, they often delay or withhold the use of sustainability knowledge until the timing aligns with service priorities, team dynamics or guest expectations, an aspect largely overlooked in existing models that assume knowledge can be deployed whenever required (Kim et al., 2019). Recognising temporality as part of sustainability knowledge advances theoretical understanding by showing that knowledge becomes effective only when it aligns with organisational rhythms, thereby revealing an underexplored mechanism through which sustainability practices gain or lose traction.

The third contribution of this thesis advances theoretical understanding of organisational learning mechanisms by demonstrating that learning related to sustainability in hotels is fragmented rather than systematic. OLM theory typically presents learning as a structured organisational process through which knowledge is acquired, shared and retained (Argyris, 1996). The findings challenge this assumption by showing that the realities of hotel work shift patterns, departmental boundaries and high staff turnover create discontinuities that disrupt the flow of sustainability-related learning. Theoretically, this refines OLM scholarship by revealing that learning in hospitality operates as a partial and uneven process, explaining why sustainability practices struggle to accumulate over time as discussed by Hermelingmeier and von Wirth (2021). A further contribution lies in highlighting the central role of informal learning in sustaining sustainability practices, as noticed by Pham et al. (2019). While existing hospitality research (Kim et al., 2019; Pham et al., 2019) emphasises formal training and procedures as key tools for embedding sustainability, this thesis demonstrates that employees rely far more on tacit, relational learning developed through daily interactions, peer support and shared routines. Formal systems are limited in reach and durability, particularly in fast-paced service environments (Robinson et al., 2019). This extends OLM theory by showing that informal, interpersonal learning, not formal mechanisms, are the primary means through which sustainability learning is interpreted, reinforced and adapted within Fragmented

Learning Ecologies. The thesis contributes by explaining how structural fragmentation weakens the retention and transmission of sustainability learning. When learning remains confined to specific individuals or teams, it becomes vulnerable to erosion when those individuals leave or when operational pressures intensify. Existing OLM literature acknowledges barriers to learning (Argyris and Schön, 1997; Lipshitz et al., 2002) but gives limited attention to how different organisational contexts and structures exacerbate these barriers. By showing how fragmentation restricts the movement of sustainability learning across time and teams, the thesis advances theory by identifying why sustainability initiatives often lose momentum despite initial enthusiasm (Filimonau et al., 2021). Therefore, these insights offer a more contextually grounded and dynamic conceptualisation of OLMs in hospitality settings. They show that learning is shaped by informal interactions and structural constraints rather than by coherent organisational systems. In doing so, this contribution advances the thesis aim by revealing how the continuity of sustainability practices depends on the extent to which learning can be shared, reinforced and sustained across everyday hotel operations. Embedding sustainability, therefore, requires organisational conditions that support learning continuity, not just knowledge provision.

Collectively, this thesis advances our understanding of how sustainability becomes embedded in organisational contexts, a gap repeatedly highlighted by scholars who show that organisational commitments and certifications often fail to translate into consistent operational practice (Baum, 2018; Robertson and Barling, 2017; Filimonau et al., 2021). Extant literature conceptualises sustainability embedding as the outcome of managerial intent, policy structures, technological interventions, or consumer pressures (Patiar and Wang, 2016; Nimri et al., 2020; Han, 2021), assuming that once systems are in place, sustainability will naturally diffuse throughout the organisation. Yet research increasingly demonstrates that sustainability succeeds or breaks down through the everyday actions, judgements, and interpretations of employees (Kim et al., 2019; Pham et al., 2019; Ioannides et al., 2021), although theory provides little explanation of who, how and when these processes take effect. This thesis fills that gap by conceptualising sustainability embedding as an emergent organisational process produced through employee-mediated mechanisms rather than a linear

outcome of formal structures. It demonstrates that sustainability is not a task confined to certain departments or hierarchical levels, but a shared organisational responsibility enacted by employees across diverse roles, backgrounds, and capabilities, often under significant time pressure, workload intensity, and service demands. It demonstrates that employee engagement, which has largely been examined through performance-oriented outcomes (Saks, 2019; Jyoti et al., 2022) and rarely theorised in sustainability contexts (Alipour et al., 2019; Graham et al., 2023), is a critical mechanism through which organisational sustainability commitments become actionable. By delineating the components of green employee engagement and evidencing its role in determining the uptake of sustainability practices, the thesis demonstrates that engagement is the first employee-mediated process through which sustainability begins to embed in daily hotel operations. Relatedly, most existing research treats sustainability knowledge as something employees simply possess, often assuming that declarative, procedural or effectiveness knowledge will directly lead to sustainable behaviour (Kaiser and Fuhrer, 2003; Chan et al., 2014; Okumus et al., 2019). Conversely, this thesis demonstrates that knowledge only becomes effective when it is mobilised and timed appropriately within the constraints of hotel work. By demonstrating that employees activate sustainability knowledge selectively and contextually, as seen in Martínez-Martínez et al., (2023) and by introducing temporal knowledge as a missing dimension, this thesis moves sustainability knowledge theory beyond static, individual-level models. This directly advances the thesis aim by showing that it is the mobilisation, rather than the possession, of knowledge that enables sustainability to become embedded in everyday hotel operations. However, the thesis also demonstrates that this knowledge doesn't become embedded through formal learning structures but through the ongoing, informal learning that occurs within daily hotel work (Argyris and Schön, 1997; Pham et al., 2019). Whereas OLM scholarship typically assumes that learning systems operate coherently across an organisation (Lipshitz et al., 2002), the findings show that in hospitality settings, it is the movement of learning through everyday interactions, rather than the design of formal mechanisms, that determines whether sustainability practices persist. This advances the thesis aim by identifying learning continuity as a core employee-mediated process through which sustainability is reinforced and

sustained within hotel operations, offering a more dynamic and context-responsive understanding of how organisational learning supports sustainability in practice.

By showing that employees translate commitments into practice through the context-sensitive mobilisation of sustainability knowledge, emotionally grounded engagement, and informal learning, the thesis advances theoretical understanding of sustainability as a process grounded in organisational learning rather than discrete training interventions. We note this is particularly crucial in Fragmented Learning Ecologies where traditional training alone is insufficient. It highlights that employees from diverse backgrounds require ongoing, collective, and contextual learning opportunities, not isolated formal training, for sustainability to become durable within operations.

In summary, the thesis provides a more realistic, empirically grounded, and theoretically coherent explanation of how sustainability becomes embedded in hotel operations, extending current models (Chan, 2011; Pham et al., 2020; Duarte et al., 2020) by demonstrating that sustainability persists not because policies exist, but when employees are enabled and supported to integrate sustainability into the flow of daily work. This represents the thesis's core contribution to knowledge, offering a new conceptualisation of sustainability embedding that foregrounds employees as the primary agents through whom sustainability becomes a lived organisational process.

5.3 Practical Contributions

The findings of this thesis provide several practical insights for hotel organisations seeking to embed environmental sustainability within daily operations. While sustainability commitments are increasingly visible within the hospitality sector, the findings of this research demonstrate that the successful implementation of sustainability practices depends largely on how employees engage with, understand, and learn sustainability within their operational environment. Given the labour-intensive nature of hotel operations and the continuous service delivery expected in the sector, sustainability initiatives must be designed in ways that align with existing workflows and operational pressures rather than being perceived as additional tasks

for employees. The practical recommendations presented here draw on the findings of the three empirical studies and outline actionable strategies that hotel organisations can implement to strengthen employee engagement, enhance sustainability knowledge, and support organisational learning.

Strengthening Employee Engagement in Sustainability Practices

The findings of the first study demonstrate that employee engagement is a key driver of sustainability implementation in hotel operations. Hotels should therefore prioritise strategies that actively involve employees in sustainability initiatives rather than relying solely on top-down environmental policies. Managers can encourage engagement by embedding sustainability discussions within existing operational routines such as daily briefings, departmental meetings, and shift handovers. These regular interactions provide opportunities for employees to share operational insights and identify practical ways to improve environmental performance without disrupting service delivery.

Leadership behaviour also plays an important role in fostering sustainability engagement. Managers who visibly support sustainability initiatives and recognise employees' contributions can strengthen employees' emotional and cognitive commitment to environmental practices. Previous research highlights that leadership support and clear communication significantly influence employee engagement with sustainability initiatives (Kim et al., 2019; Pham et al., 2019). Hotels can reinforce engagement by providing visible feedback on sustainability outcomes, such as displaying energy consumption reductions or waste diversion achievements within staff areas. These practices help employees recognise the impact of their actions and reinforce the importance of sustainability within the organisational culture.

Given the high workload and shift-based structure of hotels, sustainability initiatives should also be designed to fit within operational workflows. Simple operational measures, such as clearly labelled recycling systems, accessible sustainability guidelines, and easy-to-follow resource conservation procedures, can help employees integrate sustainability into their daily tasks without increasing workload pressures.

Enhancing Sustainability Knowledge Across Hotel Operations

The findings of the second study demonstrate that sustainability knowledge within hotels is often unevenly distributed across organisational roles. While managerial staff may have greater awareness of sustainability strategies and organisational goals, frontline employees often develop sustainability knowledge through informal learning and daily operational experience. To address this imbalance, hotels should adopt structured approaches to sustainability training that combine formal instruction with experiential learning.

Sustainability training can be incorporated into employee onboarding processes to ensure that new staff understand environmental practices from the beginning of their employment. However, training alone is unlikely to be sufficient in the dynamic operational environment of hotels. Continuous learning opportunities should therefore be provided through informal mechanisms such as peer learning, mentoring, and cross-departmental collaboration. For example, employees in departments such as housekeeping, food and beverage, and maintenance may share practical insights about waste management, resource efficiency, or sustainable procurement practices.

Knowledge sharing can also be strengthened through cross-departmental communication structures that allow employees to discuss sustainability practices and operational challenges. Such mechanisms encourage the circulation of sustainability knowledge throughout the organisation rather than restricting it to managerial levels. Organisational sustainability research emphasises that knowledge sharing and collective learning are essential for embedding environmental practices within organisational routines (Benn et al., 2014).

Supporting Organisational Learning Mechanisms

The third study highlights the importance of organisational learning mechanisms in sustaining sustainability initiatives over time. The findings indicate that sustainability learning within hotels often occurs in fragmented ways across departments and roles, creating challenges for the consistent implementation of sustainability practices. Hotels can address this fragmentation by establishing organisational structures that support continuous learning and knowledge circulation.

One approach involves integrating sustainability learning into routine operational processes. Short sustainability briefings during shift meetings can provide opportunities to reinforce environmental practices and share practical knowledge across teams. Visible communication tools, such as sustainability dashboards or notice boards in staff areas, can also help employees track progress and understand the outcomes of sustainability initiatives.

Hotels should also ensure that sustainability knowledge is retained despite staff turnover, which is common within the hospitality sector. Embedding sustainability practices within standard operating procedures can help maintain continuity even when staff roles change. Documenting sustainability practices and integrating them into operational guidelines ensures that knowledge is institutionalised rather than dependent on individual employees.

Leadership plays a central role in supporting organisational learning processes. Managers who encourage knowledge sharing and create opportunities for employees to contribute ideas can strengthen organisational capacity to adapt and improve sustainability practices. Research on organisational learning suggests that continuous improvement requires both the sharing of knowledge and the willingness to revise existing practices when necessary (Argyris and Schön, 1996; Lipshitz et al., 2006).

Integrating Sustainability within the Operational Realities of Hotels

Taken together, the findings of this thesis demonstrate that embedding sustainability in hotels requires coordinated action across employee engagement, knowledge development, and organisational learning. Sustainability initiatives must be designed with an understanding of the operational realities of the hospitality sector, including the labour-intensive nature of hotel work, the continuous 24-hour service environment, and the need to balance sustainability practices with guest satisfaction and operational efficiency.

By developing organisational systems that support employee engagement, strengthen sustainability knowledge, and facilitate organisational learning, hotel organisations can move beyond symbolic sustainability commitments and embed environmental practices more effectively within daily operations.

Chapter VI- Conclusion

6.1 Conclusion

This thesis set out to address a key gap in hospitality sustainability research: to explore how sustainability becomes embedded as an organisational process in hotels by examining the employee-mediated mechanisms that translate stated commitments into consistent everyday practice. Although sustainability has increasingly become a strategic priority, much existing scholarship has focused on managerial interventions, policy commitments, or broad behavioural outcomes, offering limited insight into the organisational processes that allow sustainability to take root in practice (Filimonau et al, 2019; Baum et al, 2019). What has remained insufficiently examined is how employees, who operate closest with guests, service routines, and operational pressures, shape the meaning, feasibility, and continuity of sustainability within hotel operations. In response, the thesis examines how sustainability becomes embedded as an organisational process by investigating the employee-mediated mechanisms that shape how sustainability is understood, enacted, and sustained over time.

The findings demonstrate that sustainability does not become established through policies, formal training, or managerial intention alone. Instead, it emerges from how employees interpret organisational expectations, navigate competing demands, and interact with colleagues and managers in the flow of their work. These situated actions and judgements occur within the rhythms, constraints, and social dynamics of hotel operations, emphasising the need to conceptualise sustainability as something that is constructed and maintained through everyday practice rather than imposed through top-down strategy.

Drawing on interviews and case study evidence, the thesis shows that employees influence the trajectory of sustainability initiatives through interconnected processes involving engagement, knowledge use, and learning. These processes intersect to determine whether sustainability becomes actionable, gains momentum, or dissipates under operational pressure. By illustrating how these dynamics unfold within the organisational context, the thesis positions sustainability embedding as a dynamic, relational, and temporal accomplishment shaped by employees' interpretations, workplace conditions, and the broader service environment.

Collectively, the findings advance theoretical understanding in several important ways. First, they reposition employees as central agents in shaping sustainability, demonstrating that embedding depends as much on how employees interpret and enact sustainability as on organisational intent. Second, they highlight the temporal and contextual nature of sustainable action, showing that sustainability becomes durable only when it fits the practical realities of hotel work. Third, the findings illuminate the importance of shared learning and informal knowledge flows, revealing how sustainability relies on relational connections and continuity of expertise within a fragmented organisational environment.

Taken together, the thesis demonstrates that sustainability in hotels is built through the realities of everyday work rather than through formal structures. By showing how employees shape the direction and momentum of sustainability in practice, the research offers insight into how hotels can cultivate forms of sustainable practice that are both meaningful and durable. In this way, the thesis adds clarity to how sustainability can move from aspiration to lived organisational practice within the hospitality sector.

6.2 Limitations and Further Research

While this thesis provides new insights into how sustainability becomes embedded within hotel operations through employee engagement, sustainability knowledge, and organisational learning mechanisms, several opportunities remain for further research. These opportunities relate to both theoretical development and methodological advancement within hospitality sustainability research.

Future research could further investigate how employee sustainability behaviours develop across different organisational contexts within the hospitality industry. While this thesis focuses on environmental sustainability practices within hotel operations, future studies could examine how employee sustainability behaviours evolve over time and how they interact with organisational structures and leadership practices. The employee sustainability behaviour framework proposed by Ones and Dilchert (2013) provides a useful theoretical foundation for examining how both task-related and

discretionary environmental behaviours emerge within organisations. Longitudinal research designs could be particularly valuable in this area, as they would allow researchers to observe how sustainability behaviours change as organisations introduce new environmental initiatives or organisational learning mechanisms.

This thesis highlights the importance of sustainability knowledge in shaping employees' ability to enact sustainability practices. However, the findings also reveal that sustainability knowledge often develops through informal and experiential learning processes within hotel environments. Future research could therefore explore how sustainability knowledge flows across organisational roles and departments in greater detail. Comparative studies examining knowledge dynamics across different types of hospitality organisations, such as independent hotels, chain hotels, or other tourism businesses, could provide valuable insights into how organisational structures influence knowledge dissemination. Methodologically, mixed-method research combining qualitative interviews with organisational network analysis could help identify patterns of knowledge sharing and reveal how sustainability knowledge circulates within complex service organisations (Benn et al., 2014).

The findings of this thesis also highlight the importance of organisational learning mechanisms in embedding sustainability practices. However, the concept of a Fragmented Learning Ecology introduced in this research suggests that learning processes may operate unevenly across organisational roles and departments. Future studies could therefore further investigate how organisational learning mechanisms function in labour-intensive service sectors such as hospitality. Comparative case studies across multiple hotel organisations could provide deeper insight into how different organisational structures influence sustainability learning processes. Such studies could draw on organisational learning theory (Argyris and Schön, 1996; Lipshitz et al., 2006) to examine how learning mechanisms support the institutionalisation of sustainability practices and how organisations overcome fragmentation in knowledge sharing.

Although this thesis focuses specifically on environmental sustainability within hotel operations, future research could explore how environmental, social, and economic dimensions of sustainability interact within hospitality organisations. Understanding

how employees navigate these multiple sustainability priorities could provide valuable insight into the broader organisational dynamics of sustainability implementation. Multi-dimensional sustainability studies could draw on stakeholder theory and corporate sustainability frameworks to examine how environmental initiatives intersect with social responsibility practices and organisational performance.

From a methodological perspective, future studies could adopt a wider range of research designs to complement the qualitative insights developed in this thesis. Quantitative studies could test the relationships identified in this research, such as the interaction between employee engagement, sustainability knowledge, and organisational learning mechanisms. Survey-based research across larger samples of hospitality organisations could provide broader generalisability and allow researchers to examine how these factors influence sustainability outcomes at scale. In addition, multi-case comparative studies could strengthen theoretical development by examining how sustainability practices vary across organisational contexts, national settings, or hospitality sectors.

Taken together, these future research directions highlight the continued importance of examining sustainability as a socially embedded organisational process shaped by employee behaviours, knowledge development, and organisational learning systems. Further research in these areas can contribute to a deeper understanding of how hospitality organisations can move beyond symbolic sustainability commitments toward more meaningful and sustained environmental change.

6.3 Final Thoughts

At the outset of this research, I was driven by a simple question: why does sustainability feel so essential in principle, yet so difficult in practice within hotels? Through this journey I have learned that the challenge lies not in the absence of good intentions but in the realities of how hotel work unfolds: demanding, fast-paced, and filled with competing priorities. For sustainability to endure, it must live within these everyday routines and decisions, not outside them.

In the past I was always part of the management team in this industry, seeing everything from inside the organisation. During this research, however, I found myself stepping outside that role, looking in as a researcher who wanted to understand how sustainability could be made easier to practise. As a practitioner, I knew the exhaustion and complexity of hotel work, and I often listened to employees share their frustrations when I was their manager, but observing the industry through a research lens revealed even deeper barriers and challenges that employees face daily, many of which remain unseen from a managerial perspective. This shift in position allowed me to see both the structural and human sides of sustainability more clearly.

In conversations with employees and managers, I found both frustration and hope. Participants spoke of pride in small changes that worked and the disappointment of seeing good ideas fade under pressure. These reflections helped me see sustainability not as a single initiative but as a shared, ongoing effort shaped by relationships, communication, and learning in the moment of work.

This research has also been personally transformative. My own experiences in the industry initially left me uncertain about whether meaningful change was possible, yet listening to others has taught me that progress often grows quietly from persistence, collaboration, and the willingness to try again. What once felt like a contradiction now feels like potential. As I move beyond this PhD, I carry forward not only the academic lessons but also a renewed confidence in the power of everyday action and collective learning to build more sustainable workplaces and communities.

References

- ABABNEH, O. M. A. 2021. How do green HRM practices affect employees' green behaviors? The role of employee engagement and personality attributes. *Journal of Environmental Planning and Management*, 64, 1204-1226.
- ABDOU, A. H., HASSAN, T. H. & EL DIEF, M. M. 2020. A description of green hotel practices and their role in achieving sustainable development. *Sustainability*, 12, 9624.
- ACAMPORA, A., PREZIOSI, M., LUCCHETTI, M. C. & MERLI, R. 2022. The role of hotel environmental communication and guests' environmental concern in determining guests' behavioral intentions. *Sustainability*, 14, 11638.
- ADAMS, S., KAGEYAMA, Y. & BARREDA, A. A. 2022. Sustainability efforts in the hotel industry: a systematic literature review.
- AGUINIS, H., KRAUS, S., POČEK, J., MEYER, N. & JENSEN, S. H. 2023. The why, how, and what of public policy implications of tourism and hospitality research. *Tourism Management*, 97, 104720.
- AHMED, M. F., MOKHTAR, M. B., LIM, C. K., HOOI, A. W. K. & LEE, K. E. 2021. Leadership roles for sustainable development: The case of a Malaysian green hotel. *Sustainability*, 13, 10260.
- AL-SABI, S. M., AL-ABABNEH, M. M., AL QSSSEM, A. H., AFANEH, J. A. A. & ELSHAER, I. A. 2024. Green human resource management practices and environmental performance: the mediating role of job satisfaction and pro-environmental behavior. *Cogent Business & Management*, 11, 2328316.
- ALHEMIMAH, A., BAQUERO, A., AL-ROMEEDY, B. S. & KHAIRY, H. A. 2024. Green organizational learning and sustainable work behavior in tourism and hotel enterprises: leveraging green intrinsic motivation and green training.
- ALIPOUR, H., SAFAEIMANESH, F. & SOOSAN, A. 2019. Investigating sustainable practices in hotel industry-from employees' perspective: Evidence from a Mediterranean Island. *Sustainability*, 11, 6556.
- ALREAHI, M., BUJDOSO, Z., DAVID, L. D. & GYENGE, B. 2023. Green supply chain management in hotel industry: A systematic review. *Sustainability*, 15, 5622.

- ALREAHI, M., BUJDOSÓ, Z., KABIL, M., AKAAK, A., BENKÓ, K. F., SETIONINGTYAS, W. P. & DÁVID, L. D. 2022. Green human resources management in the hotel industry: A systematic review. *Sustainability*, 15, 99.
- ALSHEREF, F. K., KHAIRY, H. A., ALSETOOHY, O., ELSAWY, O., FAYYAD, S., SALAMA, M., AL-ROMEEDY, B. S. & SOLIMAN, S. A. E. M. 2024. Catalyzing green identity and sustainable advantage in tourism and hotel businesses. *Sustainability*, 16, 5267.
- ALVESSON, M. & SKÖLDBERG, K. (2017). *Reflexive methodology: New vistas for qualitative research*. Sage, London.
- ALYAHIA, M., AZAZZ, A. M., FAYYAD, S., ELSHAER, I. A. & MOHAMMAD, A. A. 2024. Greenwashing behavior in hotels industry: The role of green transparency and green authenticity. *Sustainability*, 16, 1050.
- ANDOH, R. P. K., OWUSU, N. K., HAYFORD, C., ANSONG, L. O. & ANSONG, A. 2025. Implications of green knowledge sharing, organizational green culture and green training and development for organizational environmental citizenship behavior in the hotel sector. *Journal of Hospitality and Tourism Insights*, 8, 637-653.
- ANTONOVA, N., RUIZ-ROSA, I. & MENDOZA-JIMENEZ, J. 2021. Water resources in the hotel industry: a systematic literature review. *International Journal of Contemporary Hospitality Management*, 33, 628-649.
- ARENHART, R. S., MARTINS, T., UEDA, R. M., SOUZA, A. M. & ZANINI, R. R. 2024. Energy use and its contributors in hotel buildings: A systematic review and meta-analysis. *PloS one*, 19, e0309745.
- ARENHART, R. S., SOUZA, A. M. & ZANINI, R. R. 2022. Energy use and its key factors in hotel chains. *Sustainability*, 14, 8239.
- ARGYRIS, C. (1996). *Organizational learning II: Theory, method, and practice*. Addison-Wesley, Reading, MA.
- ARGYRIS, C. & SCHÖN, D. A. 1997. Organizational learning: A theory of action perspective. *Reis*, 345-348.
- ARSHAD, M., ABID, G., CONTRERAS, F., ELAHI, N. S. & AHMED, S. 2022. Greening the hospitality sector: Employees' environmental and job attitudes

- predict ecological behavior and satisfaction. *International Journal of Hospitality Management*, 102, 103173.
- ASANTE, K. 2024. Hotels' green leadership and employee pro-environmental behaviour, the role of value congruence and moral consciousness: evidence from symmetrical and asymmetrical approaches. *Journal of Sustainable Tourism*, 32, 1370-1391.
- BAKER, M. A. 2024. Sustainable tourism employment: A comprehensive overview of tourism employees' experience from a tourist-employee interaction perspective. *Journal of Hospitality and Tourism Management*, 60, 228-238.
- BAUM, T. 2015. Human resources in tourism: Still waiting for change?—A 2015 reprise. *Tourism Management*, 50, 204-212.
- BAUM, T. 2018. Sustainable human resource management as a driver in tourism policy and planning: a serious sin of omission? *Journal of Sustainable Tourism*, 26, 873-889.
- BAUM, T., CURRAN, D., HADJISOLOMOU, A., GJERALD, O., LINGE, T. T., YOO, K. I. & WINCHENBACH, A. 2024. Interrogating Tourism and Hospitality's Wicked Employment Issues Through the Lens of Paradox Theory. *Tourism Policy-Making in the Context of Contested Wicked Problems: Politics, Paradigm Shifts and Transformation Processes*. Emerald Publishing Limited.
- BAUM, T. & HAI, N. T. T. 2019. Applying sustainable employment principles in the tourism industry: righting human rights wrongs? *Tourism Recreation Research*, 44, 371-381.
- BAUM, T., KRALJ, A., ROBINSON, R. N. & SOLNET, D. J. 2016. Tourism workforce research: A review, taxonomy and agenda. *Annals of Tourism Research*, 60, 1-22.
- BENN, S., EDWARDS, M. & WILLIAMS, T. (2014). *Organizational change for corporate sustainability*. Routledge, London.
- BIANCO, S., BERNARD, S. & SINGAL, M. 2023. The impact of sustainability certifications on performance and competitive action in hotels. *International Journal of Hospitality Management*, 108, 103379.

- BILDERBACK, S. 2024. Integrating training for organizational sustainability: the application of Sustainable Development Goals globally. *European Journal of Training and Development*, 48, 730-748.
- BLANCO-MORENO, S., AYDEMIR-DEV, M., SANTOS, C. R. & BAYRAM-ARLI, N. 2025. Emerging sustainability themes in the hospitality sector: A bibliometric analysis. *European Research on Management and Business Economics*, 31, 100272.
- BOCCOLI, G., GASTALDI, L. & CORSO, M. 2023. The evolution of employee engagement: Towards a social and contextual construct for balancing individual performance and wellbeing dynamically. *International Journal of Management Reviews*, 25, 75-98.
- BRYMAN, A. (2016). *Social research methods*. Oxford University Press, Oxford.
- BUHALIS, D., HARWOOD, T., BOGICEVIC, V., VIGLIA, G., BELDONA, S. & HOFACKER, C. 2019. Technological disruptions in services: lessons from tourism and hospitality. *Journal of Service Management*, 30, 484-506.
- CALISTO, M. D. L., UMBELINO, J., GONÇALVES, A. & VIEGAS, C. 2021. Environmental sustainability strategies for smaller companies in the hotel industry: doing the right thing or doing things right? *Sustainability*, 13, 10380.
- CHAN, E. K. & WAN, L. C. 2023. How eco-certificate/effort influences hotel preference. *Annals of Tourism Research*, 101, 103616.
- CHAN, E. S., HON, A. H., CHAN, W. & OKUMUS, F. 2014. What drives employees' intentions to implement green practices in hotels? The role of knowledge, awareness, concern and ecological behaviour. *International Journal of Hospitality Management*, 40, 20-28.
- CHAN, E. S., HON, A. H., OKUMUS, F. & CHAN, W. 2017. An empirical study of environmental practices and employee ecological behavior in the hotel industry. *Journal of Hospitality & Tourism Research*, 41, 585-608.
- CHANDRAN, C. & BHATTACHARYA, P. 2021. Hotel's best practices as strategic drivers for environmental sustainability and green marketing. *Consumer behaviour in hospitality and tourism*. Routledge.

- CHARMAZ, K., THORNBERG, R. & KEANE, E. 2018. Evolving grounded theory and social justice inquiry. *The SAGE handbook of qualitative research*, 5, 411-443.
- CHI, X., MENG, B., LEE, H., CHUA, B. L. & HAN, H. 2023. Pro-environmental employees and sustainable hospitality and tourism businesses: Exploring strategic reasons and global motives for green behaviors. *Business Strategy and the Environment*, 32, 4167-4182.
- CHO, Y. & CHOI, Y. 2021. When and how does sustainable HRM improve customer orientation of frontline employees? Satisfaction, empowerment, and communication. *Sustainability*, 13, 3693.
- CHUA, B.-L. & HAN, H. 2022. Green hotels: The state of green hotel research and future prospects. *Journal of Travel & Tourism Marketing*, 39, 465-483.
- CHUA, B.-L., KIM, S., BAAH, N. G., MOON, H., YU, J. & HAN, H. 2024. When hospitality brands go green: the role of authenticity and stereotypes in building customer-green brand relationships. *Journal of Sustainable Tourism*, 32, 1118-1141.
- CLIMATE CHANGE COMMITTEE. (2020). *The Sixth Carbon Budget: The UK's Path to Net Zero*. Climate Change Committee, London. Available at: <https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf> (Accessed on 12/12/25, at 14:26)
- CLIMATE CHANGE COMMITTEE. (2025). *The Seventh Carbon Budget: Advice for the UK Government*. Climate Change Committee, London. Available at: <https://www.theccc.org.uk/wp-content/uploads/2025/02/The-Seventh-Carbon-Budget.pdf> (Accessed on 12/12/25, at 14:26)
- COOPER, C. 2006. Knowledge management and tourism. *Annals of tourism research*, 33, 47-64.
- CROTTY, M. J. (1998). *The foundations of social research: Meaning and perspective in the research process*. Sage, London.
- DANI, R., TIWARI, K. & NEGI, P. 2021. Ecological approach towards sustainability in hotel industry. *Materials Today: Proceedings*, 46, 10439-10442.

- DARVISHMOTEBALI, M. & ALTINAY, L. 2022. Green HRM, environmental awareness and green behaviors: The moderating role of servant leadership. *Tourism Management*, 88, 104401.
- DAVID, M. & SUTTON, C. (2010). *Social research: An introduction*. Sage, London.
- DENZIN, N. K. (2018). *The qualitative manifesto: A call to arms*. Routledge, London.
- DIAZ-FARINA, E., DÍAZ-HERNÁNDEZ, J. J. & PADRÓN-FUMERO, N. 2023. Analysis of hospitality waste generation: Impacts of services and mitigation strategies. *Annals of Tourism Research Empirical Insights*, 4, 100083.
- DIBENE-ARRIOLA, L. M., CARRILLO-GONZÁLEZ, F. M., QUIJAS, S. & RODRÍGUEZ-URIBE, M. C. 2021. Energy efficiency indicators for hotel buildings. *Sustainability*, 13, 1754.
- DWESINI, N. F. 2019. Causes and prevention of high employee turnover within the hospitality industry: A literature review. *African Journal of Hospitality, Tourism and Leisure*, 8, 1-15.
- EID, R., AGAG, G. & SHEHAWY, Y. M. 2021. Understanding guests' intention to visit green hotels. *Journal of Hospitality & Tourism Research*, 45, 494-528.
- ELKINGTON, J. 1997. The triple bottom line. *Environmental Management: Readings and cases*, 2, 49-66.
- ELSHAER, I. A., AZAZZ, A. M. S., ALSHEBAMI, A. S., ABDULAZIZ, T., MANSOUR, M. & FAYYAD, S. 2024. Internal green marketing orientation and business performance: The role of employee environmental commitment and green organizational identity. *International Journal of Innovative Research and Scientific Studies*, 7, 211-225.
- FILIMONAU, V., BAI, L., ROMANENKO, A., TARAKANOVA, V. & ERMOLAEV, V. A. 2023. How employees perceive and (dis) engage with 'green' practices in luxury hotels. *International Journal of Hospitality Management*, 114, 103567.
- FILIMONAU, V. & DELYSIA, A. 2019. Food waste management in hospitality operations: A critical review. *Tourism Management*, 71, 234-245.
- FILIMONAU, V., SANTA ROSA, M., FRANCA, L. S., CREUS, A. C., RIBEIRO, G. M., MOLNAROVA, J., PIUMATTI, R. G., VALSASINA, L. & SAFAEI, A. 2021. Environmental and carbon footprint of tourist accommodation: A comparative study of popular hotel categories in Brazil and Peru. *Journal of Cleaner Production*, 328, 129561.

- FINLAY, L. 2002. Negotiating the swamp: the opportunity and challenge of reflexivity in research practice. *Qualitative research*, 2, 209-230.
- FLORES-HERNÁNDEZ, J. A., CAMBRA-FIERRO, J. J. & VÁZQUEZ-CARRASCO, R. 2020. Sustainability, brand image, reputation and financial value: Manager perceptions in an emerging economy context. *Sustainable Development*, 28, 935-945.
- FU, Q., GHARDALLOU, W., COMITE, U., SIDDIQUE, I., HAN, H., ARJONA-FUENTES, J. M. & ARIZA-MONTES, A. 2022. The role of CSR in promoting energy-specific pro-environmental behavior among hotel employees. *Sustainability*, 14, 6574.
- FUCHS, G., REICHEL, A. & PORIA, Y. 2021. Exploring the images of hospitality line-level employment: Hotel employees' perceptions vs. the general public's perceptions. *European Journal of Tourism Research*, 27, 2703-2703.
- GALATI, A., THRASSOU, A., CHRISTOFI, M., VRONTIS, D. & MIGLIORE, G. 2023. Exploring travelers' willingness to pay for green hotels in the digital era. *Journal of Sustainable Tourism*, 31, 2546-2563.
- GIOIA, D. A. & PITRE, E. 1990. Multiparadigm perspectives on theory building. *Academy of Management Review*, 15, 584-602.
- GÖSSLING, S., BALAS, M., MAYER, M. & SUN, Y.-Y. 2023. A review of tourism and climate change mitigation: The scales, scopes, stakeholders and strategies of carbon management. *Tourism Management*, 95, 104681.
- GRAHAM, S., CADDEN, T. & TREACY, R. 2023. Examining the influence of employee engagement in supporting the implementation of green supply chain management practices: A green human resource management perspective. *Business Strategy and the Environment*, 32, 4750-4766.
- GREAT BRITAIN. (2008). *Climate Change Act 2008 (c.27)*, The Stationery Office, London. Available at : <https://www.legislation.gov.uk/ukpga/2008/27/contents> (Accessed on 12/12/25, at 14:26).
- GREAT BRITAIN. (2019). *The Climate Change Act 2008 (2050 Target Amendment) Order 2019 (S.I. 2019/1056)*, The Stationery Office, London. Available at:

<https://www.legislation.gov.uk/uksi/2019/1056/contents/made> (Accessed on 12/12/25, at 14:26).

- GUNDUZ SONGUR, A., TURKTARHAN, G. & COBANOGLU, C. 2023. Progress on green technology research in hotels: a literature review. *Journal of Hospitality and Tourism Insights*, 6, 2052-2072.
- HAN, H. 2020. Theory of green purchase behavior (TGPB): A new theory for sustainable consumption of green hotel and green restaurant products. *Business Strategy and the Environment*, 29, 2815-2828.
- HAN, H. 2021. Consumer behavior and environmental sustainability in tourism and hospitality: A review of theories, concepts, and latest research. *Sustainable consumer behaviour and the environment*, 1-22.
- HE, Z., LIU, Y., LIU, X., WANG, F. & ZHU, H. 2022. Influence of multi-dimensional environmental knowledge on residents' waste sorting intention: Moderating effect of environmental concern. *Frontiers in Psychology*, 13, 957683.
- HERMELINGMEIER, V. & VON WIRTH, T. 2021. The nexus of business sustainability and organizational learning: A systematic literature review to identify key learning principles for business transformation. *Business Strategy and the Environment*, 30, 1839-1851.
- IOANNIDES, D., GYIMÓTHY, S. & JAMES, L. 2021. From liminal labor to decent work: A human-centered perspective on sustainable tourism employment. *Sustainability*, 13, 851.
- JYOTI, J. & DIMPLE 2022. Fun at workplace and intention to leave: role of work engagement and group cohesion. *International Journal of Contemporary Hospitality Management*, 34, 782-807.
- KAHN, W. A. 1990. Psychological conditions of personal engagement and disengagement at work. *Academy of management journal*, 33, 694
- KAISER, F. G. & FUHRER, U. 2003. Ecological behavior's dependency on different forms of knowledge. *Applied psychology*, 52, 598-613.
- KARATEPE, O. M., REZAPOURAGHDAM, H. & HASSANNIA, R. 2021. Does employee engagement mediate the influence of psychological contract breach on pro-environmental behaviors and intent to remain with the organization in

- the hotel industry? *Journal of Hospitality Marketing & Management*, 30, 326-353.
- KARATEPE, T., OZTUREN, A., KARATEPE, O. M., UNER, M. M. & KIM, T. T. 2022. Management commitment to the ecological environment, green work engagement and their effects on hotel employees' green work outcomes. *International Journal of Contemporary Hospitality Management*, 34, 3084-3112.
- KHALIL, N., CHE ABDULLAH, S. N., HARON, S. N. & HAMID, M. Y. 2024. A review of green practices and initiatives from stakeholder's perspectives towards sustainable hotel operations and performance impact. *Journal of Facilities Management*, 22, 653-682.
- KHATTER, A. 2023. Challenges and solutions for environmental sustainability in the hospitality sector. *Sustainability*, 15, 11491.
- KHATTER, A., WHITE, L., PYKE, J. & MCGRATH, M. 2021a. Barriers and drivers of environmental sustainability: Australian hotels. *International Journal of Contemporary Hospitality Management*, 33, 1830-1849.
- KHATTER, A., WHITE, L., PYKE, J. & MCGRATH, M. 2021b. Stakeholders' influence on environmental sustainability in the Australian hotel industry. *Sustainability*, 13, 1351.
- KIM, Y. H., BARBER, N. & KIM, D.-K. 2019. Sustainability research in the hotel industry: Past, present, and future. *Journal of Hospitality Marketing & Management*, 28, 576-620.
- KNEZEVIC CVELBAR, L., GRÜN, B. & DOLNICAR, S. 2024. Do employees hold the key to environmental sustainability in tourism businesses? Empirical evidence from a field study. *Journal of Sustainable Tourism*, 32, 245-258.
- LADKIN, A., MOONEY, S., SOLNET, D., BAUM, T., ROBINSON, R. & YAN, H. 2023. A review of research into tourism work and employment: Launching the Annals of Tourism Research curated collection on tourism work and employment. *Annals of Tourism Research*, 100, 103554.
- LASHITEW, A. A. 2021. Corporate uptake of the Sustainable Development Goals: Mere greenwashing or an advent of institutional change? *Journal of International Business Policy*, 4, 184-200.

- LEGRAND, W., CHEN, J. S. & LAEIS, G. C. (2022). *Sustainability in the hospitality industry: Principles of sustainable operations*. Routledge, London..
- LIBURD, J. J. & BECKEN, S. 2020. Values in nature conservation, tourism and UNESCO World Heritage Site stewardship. *Protected areas, sustainable tourism and neo-liberal governance policies*. Routledge.
- LIN, M.-T., ZHU, D., LIU, C. & KIM, P. B. 2022. A systematic review of empirical studies of pro-environmental behavior in hospitality and tourism contexts. *International Journal of Contemporary Hospitality Management*, 34, 3982-4006.
- LINCOLN, Y. S. & GUBA, E. G. (1985). *Naturalistic inquiry*. Sage, Beverly Hills, CA.
- LIPSHITZ, R., FRIEDMAN, V. & POPPER, M. (2006). *Demystifying organizational learning*. Sage, London.
- LIPSHITZ, R., POPPER, M. & FRIEDMAN, V. J. 2002. A multifacet model of organizational learning. *The journal of applied behavioral science*, 38, 78-98.
- LOEHR, J. & BECKEN, S. 2021. The tourism climate change knowledge system. *Annals of Tourism Research*, 86, 103073.
- LÓPEZ-GAMERO, M. D., MOLINA-AZORÍN, J. F., PEREIRA-MOLINER, J. & PERTUSA-ORTEGA, E. M. 2023. Agility, innovation, environmental management and competitiveness in the hotel industry. *Corporate Social Responsibility and Environmental Management*, 30, 548-562.
- LOUREIRO, S. M. C., GUERREIRO, J. & HAN, H. 2022. Past, present, and future of pro-environmental behavior in tourism and hospitality: A text-mining approach. *Journal of Sustainable Tourism*, 30, 258-278.
- LUNE, H. & BERG, B. L. (2017). *Qualitative research methods for the social sciences*. Pearson, Harlow.
- LUU, T. T. 2020. Reducing food waste behavior among hospitality employees through communication: dual mediation paths. *International Journal of Contemporary Hospitality Management*, 32, 1881-1904.
- MAHRAN, K., IBRAHIM, B. A., ALBARRAK, H. & ELAMER, A. A. 2025. Green workforce in tourism and hospitality: A systematic review and future research agenda. *International Journal of Hospitality Management*, 131, 104325.

- MAJEED, S. & KIM, W. G. 2023. A reflection of greenwashing practices in the hospitality industry: a scoping review. *International Journal of Contemporary Hospitality Management*, 35, 1125-1146.
- MARTÍNEZ-MARTÍNEZ, A., CEGARRA-NAVARRO, J.-G. & GARCIA-PEREZ, A. 2023. Sustainability knowledge management and organisational learning in tourism: Current approaches and areas for future development. *Knowledge Management, Organisational Learning and Sustainability in Tourism*, 1-13.
- MARTÍNEZ-MARTÍNEZ, A., CEGARRA-NAVARRO, J.-G., GARCIA-PEREZ, A. & WENSLEY, A. 2019. Knowledge agents as drivers of environmental sustainability and business performance in the hospitality sector. *Tourism management*, 70, 381-389.
- MEJIA, C. 2019. Influencing green technology use behavior in the hospitality industry and the role of the “green champion”. *Journal of Hospitality Marketing & Management*, 28, 538-557.
- MERLI, R., PREZIOSI, M., ACAMPORA, A. & ALI, F. 2019. Why should hotels go green? Insights from guests experience in green hotels. *International Journal of Hospitality Management*, 81, 169-179.
- MIHALIC, T. 2020. Conceptualising overtourism: A sustainability approach. *Annals of Tourism Research*, 84, 103025.
- MISIUDA, M. & LACHMANN, M. 2022. Investors’ perceptions of sustainability reporting—a review of the experimental literature. *Sustainability*, 14, 16746.
- MITTAL, S. & DHAR, R. L. 2016. Effect of green transformational leadership on green creativity: A study of tourist hotels. *Tourism management*, 57, 118-127.
- MOHD SUKI, N. & MOHD SUKI, N. 2015. Consumers’ environmental behaviour towards staying at a green hotel: Moderation of green hotel knowledge. *Management of Environmental Quality: An International Journal*, 26, 103-117.
- MOILANEN, F. & ALASOINI, T. 2023. Workers as actors at the micro-level of sustainability transitions: A systematic literature review. *Environmental Innovation and Societal Transitions*, 46, 100685.

- MOILANEN, F. & TOIKKA, A. 2023. Measuring employees' perceptions of sustainability transitions at work: a novel survey with findings from Finland. *Discover Sustainability*, 4, 45.
- MOYEEN, A. & MEHJABEEN, M. 2024. CSR research in the hotel industry: how it relates to promoting the SDGs. *Social Responsibility Journal*, 20, 1770-1786.
- NETZERONOW 2024. Urgent action needed for a Net Zero hospitality sector, says new report. Available at: <https://netzeronow.org/post/urgent-action-needed-for-a-net-zero-hospitality-sector-says-new-report> (Accessed on 12/12/25, at 12:21)
- NICKSON, D. (2013). *Human resource management for hospitality, tourism and events*. Routledge, London.
- NIMRI, R., PATIAR, A. & JIN, X. 2020. The determinants of consumers' intention of purchasing green hotel accommodation: Extending the theory of planned behaviour. *Journal of Hospitality and Tourism Management*, 45, 535-543.
- OKUMUS, F., KÖSEOĞLU, M. A., CHAN, E., HON, A. & AVCI, U. 2019. How do hotel employees' environmental attitudes and intentions to implement green practices relate to their ecological behavior? *Journal of Hospitality and Tourism Management*, 39, 193-200.
- ONES, D. S. & DILCHERT, S. 2013. Measuring, understanding, and influencing employee green behaviors. *Green organizations*. Routledge.
- ORIADE, A., OSINAIKE, A., ADUHENE, K. & WANG, Y. 2021. Sustainability awareness, management practices and organisational culture in hotels: Evidence from developing countries. *International Journal of Hospitality Management*, 92, 102699.
- PAILLÉ, P., CHEN, Y., BOIRAL, O. & JIN, J. 2014. The impact of human resource management on environmental performance: An employee-level study. *Journal of Business Ethics*, 121, 451-466.
- PARK, S.-Y. & E. LEVY, S. 2014. Corporate social responsibility: Perspectives of hotel frontline employees. *International Journal of Contemporary Hospitality Management*, 26, 332-348.
- PATIAR, A. & WANG, Y. 2016. The effects of transformational leadership and organizational commitment on hotel departmental performance. *International Journal of Contemporary Hospitality Management*, 28, 586-608.

- PATTON, M. Q. (2014). *Qualitative research & evaluation methods: Integrating theory and practice*. Sage, Thousand Oaks, CA.
- PEREIRA-MOLINER, J., LÓPEZ-GAMERO, M. D., FONT, X., MOLINA-AZORÍN, J. F., TARÍ, J. J. & PERTUSA-ORTEGA, E. M. 2021. Sustainability, competitive advantages and performance in the hotel industry: A synergistic relationship. *Journal of Tourism and Services*, 12, 132-149.
- PERTUSA-ORTEGA, E. M., TARÍ, J. J., PEREIRA-MOLINER, J., MOLINA-AZORÍN, J. F. & LÓPEZ-GAMERO, M. D. 2021. Developing ambidexterity through quality management and their effects on performance. *International Journal of Hospitality Management*, 92, 102720.
- PHAM, H., KIM, S.-Y. & LUU, T.-V. 2020. Managerial perceptions on barriers to sustainable construction in developing countries: Vietnam case. *Environment, Development & Sustainability*
- PHAM, N. T., TUČKOVÁ, Z. & JABBOUR, C. J. C. 2019. Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behavior in hotels? A mixed-methods study. *Tourism Management*, 72, 386-399.
- PRAKASH, S., SHARMA, V. P., SINGH, R., VIJAYVARGY, L. & NILAISH 2023. Adopting green and sustainable practices in the hotel industry operations-an analysis of critical performance indicators for improved environmental quality. *Management of Environmental Quality: An International Journal*, 34, 1057-1076.
- RAHMAN, I., CHEN, H. & REYNOLDS, D. 2020. Evidence of green signaling in green hotels. *International Journal of Hospitality Management*, 85, 102444.
- RAZA, S. A. & KHAN, K. A. 2022. Impact of green human resource practices on hotel environmental performance: the moderating effect of environmental knowledge and individual green values. *International Journal of Contemporary Hospitality Management*, 34, 2154-2175.
- REHMAN, S. U., ELREHAIL, H., ALSHWAYAT, D., IBRAHIM, B. & ALAMI, R. 2023. Linking hotel environmental management initiatives and sustainable hotel performance through employees' eco-friendly behaviour and

- environmental strategies: a moderated-mediated model. *European Business Review*, 35, 184-201.
- ROBERTSON, J. L. & BARLING, J. 2017. Toward a new measure of organizational environmental citizenship behavior. *Journal of Business Research*, 75, 57-66.
- ROBINSON, R. N., MARTINS, A., SOLNET, D. & BAUM, T. 2019. Sustaining precarity: Critically examining tourism and employment. *Journal of Sustainable Tourism*.
- RUBIN, A. & BELLAMY, J. (2012). *Practitioner's guide to using research for evidence-based practice*. John Wiley & Sons, Hoboken, NJ.
- RUBIO-ANDRÉS, M. & ABRIL, C. 2024. Sustainability oriented innovation and organizational values: a cluster analysis. *The Journal of Technology Transfer*, 49, 1-18.
- RUIZ-FERNÁNDEZ, L., RIENDA, L. & MARCO-LAJARA, B. 2024. Hotel chains and sustainable development: degree of internationalization, SDGs and dynamic capabilities as drivers of successful performance. *Environment, Development and Sustainability*, 1-17.
- SAKS, A. M. 2006. Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21, 600-619.
- SAKS, A. M. 2019. Antecedents and consequences of employee engagement revisited. *Journal of Organizational Effectiveness: People and Performance*, 6, 19-38.
- SCHWANDT, T. A. 1994. Constructivist, interpretivist approaches to human inquiry.
- SCOTT, D., HALL, C. M., RUSHTON, B. & GÖSSLING, S. 2024. A review of the IPCC Sixth Assessment and implications for tourism development and sectoral climate action. *Journal of Sustainable Tourism*, 32, 1725-1742.
- SHARMA, G. D., TAHERI, B., GUPTA, M. & CHOPRA, R. 2023. Over 33 years of the hospitality research: a bibliometric review of the international journal of contemporary hospitality management. *International Journal of Contemporary Hospitality Management*, 35, 2564-2589.
- SMITH, P. A. 2012. The importance of organizational learning for organizational sustainability. *The Learning Organization*, 19, 4-10.
- STAKE, R. E. (1995). *The art of case study research*. Sage, Thousand Oaks, CA.

- STREIMIKIENE, D., SVAGZDIENE, B., JASINSKAS, E. & SIMANAVICIUS, A. 2021. Sustainable tourism development and competitiveness: The systematic literature review. *Sustainable Development*, 29, 259-271.
- SUN, H., SAMAD, S., REHMAN, S. U. & USMAN, M. 2022. Clean and green: the relevance of hotels' website quality and environmental management initiatives for green customer loyalty. *British Food Journal*, 124, 4266-4285.
- TANDON, A., DHIR, A., MADAN, P., SRIVASTAVA, S. & NICOLAU, J. L. 2023. Green and non-green outcomes of green human resource management (GHRM) in the tourism context. *Tourism Management*, 98, 104765.
- TERUEL GUTIÉRREZ, R. 2020. Sustainability as a corporate strategy: A performance comparison of green and non-green SME hotels.
- TM, A., KAUR, P., BRESCIANI, S. & DHIR, A. 2021. What drives the adoption and consumption of green hotel products and services? A systematic literature review of past achievement and future promises. *Business Strategy and the Environment*, 30, 2637-2655.
- TRACY, S. J. 2010. Qualitative quality: Eight “big-tent” criteria for excellent qualitative research. *Qualitative inquiry*, 16, 837-851.
- TRANG, H. L. T., LEE, J.-S. & HAN, H. 2019. How do green attributes elicit pro-environmental behaviors in guests? The case of green hotels in Vietnam. *Journal of Travel & Tourism Marketing*, 36, 14-28.
- UKHOSPITALITY. (2022). *Net Zero – The Guide for the Brewing and Hospitality Sector*. UKHospitality, London. Available at: <https://hospitalitysectorcouncil.org/media/ry2agner/ukh-environmental-sustainability-guide-nov-23.pdf> (Accessed on 12/12/25, at 13:26)
- UNITED NATIONS. (2015). *Transforming our World: The 2030 Agenda for Sustainable Development* (A/RES/70/1), United Nations, New York. Available at : <https://sdgs.un.org/2030agenda> (Accessed on 12/12/25, at 13:29)
- UN TOURISM. (2021). *Glasgow Declaration for Climate Action in Tourism*, UN Tourism, Madrid. Available at: <https://www.untourism.int/glasgow-declaration-climate-action-tourism> (Accessed on 12/12/25, at 13:33)

- UNFCCC. (2016). *The Paris Agreement*, UNFCCC, Bonn. Available at : <https://unfccc.int/process-and-meetings/the-paris-agreement> (Accessed on 12/12/25, at 14:46)
- UNFCCC. (2023). *COP28: What Was Achieved and What Happens Next?*, UNFCCC, Bonn.
- UN TOURISM. (2025). *International Tourist Arrivals Grew 5% in Q1 2025*, UN Tourism, Madrid. Available at : https://unfccc.int/cop28?utm_source (Accessed on 12/12/25, at 14:50)
- VAN RIEL, A. C., ZHANG, J. J., MCGINNIS, L. P., NEJAD, M. G., BUJISIC, M. & PHILLIPS, P. A. 2019. A framework for sustainable service system configuration: Exploring value paradoxes with examples from the hospitality industry. *Journal of Service Management*, 30, 349-368.
- VELAORAS, K., MENEGAKI, A. N., POLYZOS, S. & GOTZAMANI, K. 2025. The role of environmental certification in the hospitality industry: Assessing sustainability, consumer preferences, and the economic impact. *Sustainability*, 17, 650.
- VOVK, I. & VOVK, Y. 2024. Sustainable personnel management in the hospitality industry: Enhancing organizational performance through employee engagement and commitment. *Economics, Management and Sustainability*, 9, 44-58.
- VRONTIS, D., IAZZI, A., MAIZZA, A. & CAVALLO, F. 2022. Stakeholder engagement in the hospitality industry: an analysis of communication in SMEs and large hotels. *Journal of Hospitality & Tourism Research*, 46, 923-945.
- WELLS, V. K., GREGORY-SMITH, D. & MANIKA, D. (2018). *Research handbook on employee pro-environmental behaviour*. Edward Elgar Publishing, Cheltenham.
- WELLS, V. K., TAHERI, B., GREGORY-SMITH, D. & MANIKA, D. 2016. The role of generativity and attitudes on employees home and workplace water and energy saving behaviours. *Tourism Management*, 56, 63-74.
- WORLD TRAVEL & TOURISM COUNCIL. (2024). *A Net Zero Roadmap for Travel & Tourism: 2nd Edition*, World Travel & Tourism Council, London. Available at : <https://researchhub.wttc.org/product/net-zero-roadmap-for-travel-tourism-2nd-edition> (Accessed on 12/12/25, at 14:53)

- WORLD TRAVEL & TOURISM COUNCIL. 2024.** A net zero roadmap for travel & tourism: 2nd edition. World Travel & Tourism Council, London.
- XIA, J. 2022. A systematic review: How does organisational learning enable ESG performance (from 2001 to 2021)? *Sustainability*, 14, 16962.
- XIAO, H. & SMITH, S. L. 2007. The use of tourism knowledge: Research propositions. *Annals of Tourism Research*, 34, 310-331.
- YIN, R. K. (2018). *Case study research and applications*. Sage, Thousand Oaks, CA.
- ZHANG, Y. & CHABAY, I. 2020. How “green knowledge” influences sustainability through behavior change: Theory and policy implications. *Sustainability*, 12, 6448.
- ZHAO, Z., CHENG, M., LV, K. & HUANG, L. 2025. What matters most? A sustainable or a conventional hotel experience? The interaction effect on guest satisfaction: A mixed-methods approach. *International Journal of Hospitality Management*, 124, 103988.