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RESEARCH ARTICLE

Biodiversity, Circularity and Business Education: Examining Organizational Ambidexterity within Ecopedagogy and Ecoliteracy

Helen Kopnina[1*], Simon Smith[2], Bastian Thomsen[3,4], Anita Garvey[1]

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Abstract

This article examines the growing need for *explorative* innovation in business education and organizational practices, particularly through positioning biodiversity at the core of business education. While current pedagogic approaches remain predominantly *exploitative*, there are notable efforts toward integrating more ecocentric and regenerative strategies. Using an Organizational Ambidexterity theoretical framework, we demonstrate how fostering critical thinking and action competencies in business curricula can lead to enhanced transformative educational practices (*explorative* innovation) that prioritize biodiversity. Through conceptual curriculum mapping and case study analysis, we explore how Organizational Ambidexterity serves as a framework for balancing and embracing the competing demands of traditional business models and sustainability imperatives. Our recommendations for business schools include embedding ambidextrous course structures that simultaneously integrate sustainability-focused innovation with conventional business education. We conclude by emphasizing the need for curriculum reform, policy advocacy, and institutional change to ensure that business education transcends exploitative paradigms and fosters explorative, nature-positive innovation.

Keywords Biodiversity · Circular Economy · Degrowth · Ecoliteracy · Ecopedagogy · Organizational Ambidexterity

Introduction

The urgency of addressing biodiversity loss has increasingly gained attention within corporate sustainability agendas, yet it remains overshadowed by the dominant focus on climate change and carbon emissions (Sala et al., 2015). Biodiversity loss threatens essential ecosystem functions and, in turn, the very foundations upon which businesses and societies depend. As businesses begin to incorporate biodiversity into their Environmental, Social, and Governance (ESG) strategies, there is also a growing need to integrate the principles of the circular economy, which focuses on minimizing waste and regenerating natural systems. Recent shifts amongst companies and asset managers reflect a growing acknowledgement of biodiversity's importance, yet the pace of this recognition has been slow (Dempsey, 2013; Muir & Bernard, 2023; OECD,

[1] Northumbria University, UK.
[2] Oxford Brookes University, UK.
[3] School of Business, Maynooth University, Maynooth, Ireland.
[4] School of Anthropology & Museum Ethnography, University of Oxford, UK.
[*]Corresponding author: helen.kopnina@northumbria.ac.uk

2020). Part of the slow progression stems from the lack of preparation of future corporate leaders (business students) to tackle both biodiversity loss and the transition to circular economic models (Kopnina et al., 2024a), and the failure to link business education, biodiversity and the circular economy within business education pedagogy.

Our study critiques the anthropocentric focus in Education for Sustainable Development (ESD) and the Sustainable Development Goals (SDGs), which often reduce biodiversity to a mere resource, thus limiting students' capacity to address the paradoxes and challenges of environmental sustainability. We argue that business education must evolve to incorporate reflexive ecopedagogy and ecoliteracy, enabling students to critically engage with alternative economic models such as the circular economy and degrowth, which seek to decouple economic growth from resource consumption. This article seeks to address these challenges by advocating for the integration of ecoliteracy, ecopedagogy, and reflexive teaching practices into business education. Using examples from corporate initiatives and educational reforms—such as ecocentric accounting, nature-positive solutions, and emancipatory accounting for biodiversity loss—we illustrate how conventional business practices can be reimagined. These approaches offer a way to reconcile the paradoxical norms of responsible management education and equip future business leaders with the skills to navigate complex environmental issues, including biodiversity conservation and circular economy implementation. Our research aims to answer the following question: "How can we overcome paradoxical norms to achieve greater integration of ecopedagogy and ecoliteracy in business education to better address the needs of non-conventional, nonhuman stakeholders?"

By positioning biodiversity at the core of business education, universities can cultivate a new generation of leaders capable of navigating the complex paradoxes of modern business and ecological responsibility. We argue that addressing biodiversity in business education, however, requires more than minor curriculum adjustments, it demands a fundamental rethinking of the values and priorities embedded in business school teaching. By embracing explorative pedagogies, such as ecoliteracy and ecopedagogy, and incorporating case studies that highlight biodiversity challenges, business schools can better prepare students to engage with the complexities of sustainability. Through our analysis of our institution's curriculum and teaching practices, we identify clear gaps in how biodiversity is addressed and propose that business education must move beyond its exploitative foundations to incorporate a more balanced and ecologically conscious approach.

Literature review

Biodiversity, as defined by the Convention on Biological Diversity (CBD, 2023), encompasses the diversity within species, between species, and across ecosystems. This complexity underscores its critical role in maintaining the resilience of natural systems, which is central to circular economy principles that emphasize ecological regeneration. Ongoing pressures, however, such as habitat destruction, climate change, and pollution, continue to drive alarming rates of species extinction (IPBES, 2019; IUCN, 2022). With increasing numbers of species threatened, biodiversity conservation is not only an environmental issue but also a strategic imperative for businesses relying on ecosystem services, which align closely with the regenerative aims of the circular economy.

The integration of biodiversity into business strategies is gaining traction, specifically through UN COP15 and COP 16 Nature agreements, particularly frameworks such as the Kunming-Montreal Global Biodiversity Framework (GBF), which emphasizes societal and economic risks posed by biodiversity decline (Ross, 2023; UNEP, 2023). Similarly, the transition toward circular economy models, which focus on decoupling growth from resource extraction, aligns with efforts to mitigate biodiversity loss by reducing the environmental impacts of business operations. The Taskforce on Nature-related Financial Disclosures (TFND, 2023), for example, highlights the need for transparent reporting on nature-related risks, signalling a growing recognition of biodiversity's relevance in corporate accountability and its connection to circular economic practices.

Despite these developments, higher education—especially university business schools—continues to lag in addressing biodiversity and planetary boundaries (CABS, 2021). The reluctance to integrate ecological knowledge, circular economy principles, and biodiversity into business education reflects a broader normative

paradox: how can institutions promote sustainability while still adhering to economic paradigms that prioritize profit maximization and linear resource use? (Moosmayer et al., 2019; Smith et al., 2023) This paradoxical tension is particularly relevant in the context of circular economy education, which challenges the traditional "take-make-dispose" model that dominates business practices. We, therefore, advocate and apply Organizational Ambidexterity as a theoretical lens to examine how business education can navigate the paradox between *exploitative* (traditional profit-driven) and *explorative* (sustainability-focused) approaches. Organizational Ambidexterity is centred around these two conceptually opposing positions, namely *exploitation* and *exploration* (Smith, 2016; Smith et al., 2022). Within a broad definition, *exploitative* approaches are considered convergent in thinking and focused on what is known (e.g., existing customers and markets), and *explorative* approaches are considered divergent in thinking (e.g., innovation, creativity, and flexibility) (Smith et al., 2022; Stokes et al., 2015).

Our central paradoxical positioning arises from a fundamental contradiction between traditional economic objectives, such as profit maximisation, market expansion, and efficiency, and the imperatives of sustainability, which emphasize ecological limits, biodiversity preservation, and circular resource flows. While mainstream business models operate within a paradigm of perpetual growth and shareholder value (arguably *exploitative* by nature), sustainability-oriented frameworks (arguably much more *explorative* by nature) challenge these assumptions by advocating for regenerative systems, closed-loop economies, and multi-species considerations (Jackson, 2017). The tension between these perspectives is particularly evident in business education, where prevailing curricula often reinforce linear economic thinking, despite increasing recognition of planetary boundaries (Rockström et al., 2009). Addressing this paradox requires not only curricular shifts but also a deeper re-evaluation of the ontological and epistemological foundations of business education, ensuring that sustainability principles are not merely add-ons but are embedded into the core logic of economic decision-making.

A more ecologically informed business education is not just a pedagogical challenge but a strategic necessity for addressing global biodiversity crises and advancing the circular economy. By drawing on stakeholder theory (Driscoll & Starik, 2004; Freeman, 2016) and post-growth economic models (Kopnina & Poldner, 2021; Otero et al., 2020; Smith et al., 2021), this research explores how business schools can foster a deeper understanding of biodiversity conservation and the circular economy. The article concludes by proposing a framework for integrating these ideas into business curricula through aligning business education with the urgent need to protect biodiversity and promote circular economic practices.

Methodology

To operationalize the lens of Organizational Ambidexterity within business education, this study employs a qualitative research approach that integrates case study analysis and conceptual curriculum mapping. By analyzing existing business school degree programs, we identify the degree to which they balance *exploitative* (traditional business modules) and *explorative* (sustainability-focused innovations) elements. Organizational Ambidexterity is applied as a guiding framework to examine how educational institutions' structure course offerings, faculty incentives, and student learning experiences can either reinforce or disrupt dominant capitalist norms. Specifically, 'structural ambidexterity' is explored through program design, highlighting the extent to which sustainability modules are siloed or integrated into core curricula. 'Contextual ambidexterity' is examined by assessing how educators and students navigate competing pressures between employability-focused skill development and transformative ecological literacy. Lastly, 'sequential ambidexterity' is analyzed by tracing the evolution of sustainability education initiatives over time.

To strengthen the practical translation of the Organizational Ambidexterity theoretical lens, we provide concrete examples of how business degree programs can incorporate ambidextrous models, such as embedding sustainability-oriented decision-making exercises within finance courses, integrating biodiversity case studies in strategy modules, and fostering interdisciplinary collaborations between business and environmental sciences. Through this approach, we aim to demonstrate how Organizational Ambidexterity can serve not just

as an analytical lens but as a transformative tool for reconfiguring business education toward greater ecological responsibility.

This study adopts a conceptual and qualitative approach that applies Organizational Ambidexterity as a theoretical lens to examine how business education can navigate the paradox between *exploitative* (traditional profit-driven) and *explorative* (sustainability-focused) perspectives. The research design incorporates curriculum mapping, case study analysis, and reflective inquiry to assess the extent to which business schools integrate biodiversity conservation and circular economy principles into their educational programs.

First, we conducted a curriculum analysis of selected business schools through using convenience sampling. Indeed, our research draws on case studies from our own institution to examine how biodiversity is (or is not) integrated into business education, to evaluate the 'structural ambidexterity' in course offerings. Specifically, we examined how sustainability content is embedded (or remains marginalized) within core business modules. Second, we engaged in a comparative case study of an institution that has successfully incorporated both theoretical and practical sustainability education. This case study illustrates concrete strategies for equipping educators with ecoliteracy and pedagogical tools that reconcile economic and ecological priorities. Third, reflective inquiry was used to critically examine how business education can transcend the limitations of exploitative dominance by integrating biodiversity as a recognized stakeholder in economic decision-making. Additionally, this research builds on secondary data analysis, drawing from institutional reports, accreditation frameworks (e.g., PRME guidelines), and prior empirical studies on sustainability education. This multi-method approach enables a structured, yet critical investigation into how Organizational Ambidexterity can be practically translated into educational practice.

The Organizational Ambidexterity Lens: Embracing the Paradox

Organizational Ambidexterity, a theory positioned within the dichotomy of *exploitative* versus *explorative* approaches (Birkinshaw & Gupta, 2013; March, 1991; O'Reilly & Tushman, 2013; Raisch et al., 2009; Stokes et al., 2015), is central to understanding how businesses navigate competing priorities. Traditionally, ambidexterity is seen as the 'balancing' act between *exploitation*, which emphasizes short-term gains, and *exploration*, which focuses on long-term innovation. In the context of business schools, *exploitative* practices dominate, driving short-termism and a focus on current students and market demands. Meanwhile, *explorative* approaches, which are critical for addressing long-term sustainability challenges like biodiversity, are neglected.

This article challenges the conventional understanding of Organizational Ambidexterity and aligns it with biodiversity and the Sustainable Development Goals (SDGs). We argue that 'balancing' these extremes is insufficient. Instead, there is an urgent need to 'embrace' paradox and prioritize *explorative* innovation to address biodiversity loss effectively (Smith et al., 2023). Our position opposes both the normative ambidexterity literature and the Principles for Responsible Management Education (PRME, 2021), and we advocate for bold, transformative change rather than incremental adjustments.

In **Table 1**, we reframe biodiversity through an Organizational Ambidexterity lens, highlighting the dominance of *exploitative* practices in business education. These practices are deeply rooted in capitalist norms that prioritize profit maximization, consumerism, and institutional rankings. Consequently, *explorative* practices, which foster long-term ecological sustainability, are insufficiently integrated into curricula. The visualized dichotomy underscores the need to overcome *exploitative* dominance and reveals that nature and nonhuman stakeholders remain unrecognized, a critical shortfall in efforts to address biodiversity loss.

Table 1 Reframing biodiversity through Organizational Ambidexterity

Dominant Exploitative Tendencies	Persisting Explorative Shortfalls	Linked Further Reasoning
Shareholder Theory, Profit-Oriented	Stakeholder Theory*, Values/SDGs-Oriented	The Hidden Curriculum, Badges/Accreditations
Individualistic/Personal Benefit	A Need for Social Benefit and Impact	The Status Quo, Cost of Living Crisis
Monetary Focus, Capitalist Conformity	Responsible Consumption and Production, PRME	Tokenism, Lack of Biodiversity Stakeholder Recognition

*Crucially, biodiversity stakeholders are not effectively recognized as stakeholders.

Source: Authors

Each dimension of ambidexterity—structural, contextual, and sequential—contributes to this evident complexity. Structural ambidexterity relates to the design of organizations and their educational programs, while contextual ambidexterity reflects individual decision-making by students and faculty members, often dominated by capitalist incentives. Sequential ambidexterity highlights the slow, tokenistic changes in educational practices over time. To create meaningful impact, we must embrace both extremes of the paradox and advance *explorative* innovation within business education, particularly concerning biodiversity.

Biodiversity as a Blind Spot in Business Education

Despite increasing recognition of environmental sustainability in business education, biodiversity remains a largely overlooked issue (Grogan-Fenn, 2023). Business school curricula and corporate practices continue to prioritize *exploitative* innovation, emphasising short-term efficiency and profitability, rather than *explorative* innovation, which fosters long-term ecological sustainability. The dominant business case for sustainability, for example, often frames resource efficiency as a cost-saving measure rather than a commitment to environmental stewardship (Cote et al., 2021). While ecocentric accounting and sustainability reporting have emerged as alternatives, their impact remains limited (Hassan et al., 2020) due to the persistent marginalization of ecocentric perspectives in business education (Anthony & Morrison-Saunders, 2023).

As our research draws on case studies from our own institutions, including curriculum mapping and analysis of course structures, we found that while sustainability is addressed to some degree program content, biodiversity remains largely absent, appearing only in elective modules or peripheral discussions. The theoretical lens of Organizational Ambidexterity offers a useful framework for understanding this gap, as it highlights the tension between *exploitative* and *explorative* educational approaches. Business schools have historically leaned towards exploitative models, favoring industry-aligned curricula that reinforce existing capitalist frameworks, while *explorative*, sustainability-driven pedagogies struggle for space (Hursh et al., 2015).

A review of our institution's teaching approaches further underscores this challenge. Amidst 47,000 articles published by Financial Times-ranked business schools between 2000-2019, only 11 explicitly address biodiversity loss (Goodall & Oswald, 2019), mirroring the limited integration of biodiversity themes in our own course offerings. Even in sustainability-focused courses, biodiversity is rarely presented as a core concern, and when it is included, it is often framed in utilitarian terms rather than through an ecocentric or justice-oriented perspective. This absence reflects a broader trend in corporate sustainability initiatives, which tend to prioritize climate change and carbon emissions, while neglecting biodiversity.

Some scholars have called for greater recognition of nonhuman stakeholders in business ethics (Dahlmann & Grosvold, 2018; Thomsen, 2022); Thomsen et al. (2024) even call for nonhumans to be treated as equal partners in any capitalist endeavour that affects them. Yet even though emerging research in business journals has challenged predominant 'business as usual paradigms', business education remains largely

anthropocentric. Our analysis of institutional materials and faculty perspectives reveals that business school curricula continue to emphasize human-centered economic models, with little engagement with posthumanist and multispecies justice frameworks (Thomsen et al., 2022). This lack of engagement limits students' ability to critically assess the ethical and economic implications of biodiversity loss. By introducing such perspectives, business education could equip students with the skills needed to navigate the complexities of multispecies coexistence and environmental responsibility.

The growing prominence of concepts such as "nature-positive solutions" (Zu Ermgassen et al., 2022) in corporate and financial discourse presents an opportunity for business schools to shift towards a more explorative approach. Emancipatory accounting, which seeks to challenge environmental and social injustices through financial reporting, has begun to incorporate biodiversity loss as a material risk (Maroun & Atkins, 2018; Zhao & Atkins, 2021). Mainstream accounting frameworks, however, remain predominantly utilitarian, reinforcing traditional economic priorities (Kumar, 2012). Based on our institutional case study, we argue that integrating extinction-risk accounting (Kopnina et al., 2024b) into business curricula could provide students with a more ecocentric perspective on sustainability.

Several examples from both corporate and educational settings support the need for more explorative innovation in business education and organizational practice, particularly regarding biodiversity. These examples illustrate how current practices remain predominantly exploitative, but also highlight efforts to integrate explorative approaches:

a. Business Case for Sustainability (Cote et al., 2021)

- **Exploitative Example**: Many organizations use the business case for sustainability to reduce resource use, not necessarily to address environmental issues, but to lower production costs and increase efficiency. This represents *exploitative* innovation as it focuses on short-term gains within the existing capitalist framework.
- **Explorative Innovation Shortfall**: While efficient resource use is beneficial, this approach does little to address long-term ecological sustainability or biodiversity preservation, focusing more on profit maximization than environmental impact.

b. Ecocentric Accounting and Sustainability Reporting (Hassan et al., 2020)

- **Exploitative Example**: Traditional corporate accounting frameworks remain rooted in financial performance metrics that neglect ecological impacts, focusing more on financial profitability and shareholder returns.
- **Explorative Innovation Shortfall**: Ecocentric accounting frameworks, which seek to integrate ecological concerns and long-term environmental risks, have made little headway. This demonstrates the slow progress in shifting towards more explorative practices within corporate reporting, despite the potential to revolutionize business approaches to sustainability.

c. Financial Times Research Ranking and Biodiversity

- **Exploitative Example**: The Financial Times research ranking of business schools has published only 11 articles out of 47,000 on biodiversity loss between 2000-2019 (Goodall & Oswald, 2019). This signals a focus on business performance metrics rather than ecological concerns.
- **Explorative Innovation Shortfall**: This significant omission highlights the disconnect between business education and environmental sustainability, especially in addressing biodiversity, which remains largely unaddressed despite the growing ecological crisis.

d. Corporate Biodiversity Initiatives (Business School Rankings, 2023)

- **Exploitative Example**: Many corporations present their sustainability efforts in terms of reducing environmental impact, but these initiatives often prioritize market demands, profitability, and resource

efficiency. They rarely address biodiversity in meaningful ways, instead treating it as a secondary concern to economic goals.

- **Explorative Innovation Shortfall**: Despite increasing awareness of the importance of biodiversity, these initiatives tend to focus on achieving certification or meeting minimum regulatory requirements rather than innovating to create sustainable ecosystems. For example, biodiversity is often a minor element in corporate Environmental, Social, and Governance (ESG) reports, further emphasizing the limited exploration of nature-positive business practices.

e. Emancipatory Accounting for Biodiversity Loss (Maroun & Atkins, 2018)

- **Explorative Innovation Example**: Emancipatory accounting aims to highlight the risks and social injustices posed by environmental degradation, such as biodiversity loss. This emerging field represents an explorative shift by calling attention to the non-financial consequences of business activities.
- **Support for Explorative Practices**: By challenging the prevailing utilitarian views that prioritize financial metrics over ecological well-being, emancipatory accounting introduces a framework that better integrates ecological and social considerations, helping to drive long-term environmental sustainability and address the root causes of biodiversity loss.

f. Nature-Positive Solutions (Zu Ermgassen et al., 2022)

- **Explorative Innovation Example**: The emergence of 'nature-positive solutions' in corporate and financial sectors reflects a shift towards integrating biodiversity considerations into business strategies. These solutions focus on actively restoring and regenerating ecosystems while maintaining business profitability.
- **Support for Explorative Practices**: This trend signals an important shift towards a more explorative innovation that not only mitigates harm but aims to enhance and regenerate natural systems, encouraging businesses to go beyond traditional exploitative models.

g. Ecopedagogy and Ecoliteracy in Business Schools (Kahn, 2010; Orr, 1990)

- **Explorative Innovation Example**: Ecopedagogy and ecoliteracy approaches aim to develop ecological awareness among business students and future leaders, challenging traditional anthropocentric and capitalist paradigms. They promote the integration of ecological knowledge into business decision-making processes, which is essential for sustainable development.
- **Support for Explorative Practices**: By teaching ecoliteracy, business schools can foster a deeper understanding of the environmental consequences of business practices and encourage future leaders to create solutions that respect planetary boundaries. This represents a shift towards explorative innovation, as it equips students with the tools to tackle complex environmental challenges, including biodiversity loss.

h. Multispecies Justice in Business Ethics (Thomsen et al., 2022)

- **Explorative Innovation Example**: Posthumanist and multispecies justice frameworks advocate for the inclusion of nonhuman stakeholders in business ethics, challenging the traditional view that only humans are entitled to moral consideration. This approach represents a transformative shift toward embracing paradox and addressing biodiversity in a more holistic, inclusive manner.
- **Support for Explorative Practices**: By integrating multispecies perspectives into business education, organizations can develop more inclusive, ecocentric strategies that prioritize the well-being of all species, not just human stakeholders. This pushes businesses beyond exploitative practices and toward a more sustainable, explorative future.

i. Extinction-Risk Accounting (Atkins et al., 2018)

- **Explorative Innovation Example**: Extinction-risk accounting seeks to quantify the impact of industrial development on species loss, creating a framework to assess and disclose the risks of biodiversity loss in business operations.
- **Support for Explorative Practices**: This approach goes beyond traditional financial accounting by incorporating ecological risks into decision-making, fostering a deeper commitment to sustainability and biodiversity preservation. It represents a significant step towards integrating long-term ecological concerns into business practices.

To address the challenges educators face in teaching biodiversity, a few examples, using the more familiar concepts of circular economy and degrowth, can be employed as well. The following revisions emphasize skill-building for educators and practical strategies for integration into business curricula.

Circular Economy and Degrowth: Challenges for Education

Educators aiming to teach circular economy and degrowth need knowledge and didactic and pedagogic competencies and skills that extend beyond traditional business education frameworks. A primary competency is understanding the theoretical distinctions and practical tensions between circular economy and degrowth approaches. While the circular economy focuses on resource loops through processes like reuse, recycling, and remanufacturing, degrowth challenges the core premise of economic growth itself, promoting societal transformation toward reduced consumption and production (Almond et al., 2020; Savini, 2021). Educators must be equipped to critically evaluate these differences and convey to students the importance of systemic change in achieving true sustainability.

One challenge is equipping educators with ecoliteracy, that is, the ability to teach students how to analyze the environmental impact of business activities, particularly using frameworks such as the 10-R hierarchy (Potting et al., 2017). This hierarchy ranges from Refuse and Rethink (which imply no resource use) to Recover, where resources are extracted at the final stage of the product life cycle. Educators must teach students to evaluate where their business activities fall within this scale and explore how they can minimize environmental impact by shifting to higher-priority actions like Refuse, Rethink, and Reduce (Banerjee et al., 2021). Additionally, critical thinking is essential to navigate the tensions between circular economy and degrowth—particularly as circularity is often marketed as a growth engine that retains profit motives, a stance at odds with degrowth principles (Corvellec et al., 2022).

Practical Curriculum Suggestions for Educators

To address the above challenges and attempt to embrace ambidextrous practices, educators should incorporate several key strategies into the curriculum:

- **Extinction Risk Accounting**: This concept, supported by ecocentric ethics, helps educators teach students to account for biodiversity loss in business decisions. Incorporating nature as a stakeholder ensures students consider ecological well-being alongside profit (Kopnina, 2020).
- **Ecoliteracy and Ecopedagogy**: These areas of knowledge and associated skills are vital for educators to help students understand complex ecological systems and the human-nature relationship. Ecoliteracy can stimulate students' ability to think critically about how business models can integrate environmental concerns into decision-making. Ecopedagogy, as a teaching method, encourages students to reflect on their ethical responsibilities toward the environment (Kahn, 2010).
- **Circular Economy and the 10-R Scale**: Educators can guide students in using the 10-R scale to assess business practices and encourage shifts toward dematerialization and reduced resource use (Savini, 2021). This practical tool helps students understand how businesses can move beyond recycling to more transformative actions like Refuse and Rethink.

- **Degrowth-Informed Conservation**: Introducing alternative economic systems, such as degrowth, in the curriculum can help students understand the need to decouple economic growth from resource consumption. This shift also teaches students to critically evaluate the sustainability claims of businesses and recognize potential greenwashing (Kopnina et al., 2023).

Educators equipped with these tools can prepare future business leaders to adopt and promote sustainable business models, acknowledging that solutions to environmental challenges require fundamental shifts in economic and societal norms. Such critical pedagogy helps students navigate the paradoxes and tensions within the circular economy and degrowth debates, ensuring they are prepared to implement meaningful, sustainability-focused changes in the business world.

Analysis and reflections: toward circular economy and biodiversity in business education

When applying an Organizational Ambidexterity lens, the analysis of current practices in business education reveals a predominance of *exploitative* strategies, especially regarding biodiversity. There are emerging *explorative* initiatives, however, that suggest a shift toward more ecocentric and circular economic orientations. Examples such as the *Business Case for Sustainability* (Cote et al., 2021), *Ecocentric Accounting and Sustainability Reporting* (Hassan et al., 2020), and *Corporate Biodiversity Initiatives* (Business School Rankings, 2023) demonstrate efforts to integrate sustainability and biodiversity in corporate settings. Despite these efforts, they often remain constrained by neoliberal capitalist frameworks that limit their transformative potential, particularly in terms of fully embracing circular economy principles, which aim to decouple economic growth from resource consumption through regenerative practices.

Applying the Organizational Ambidexterity Lens

Using Organizational Ambidexterity as a theoretical lens highlights the tension between *exploitative* and *explorative* approaches to both biodiversity and circular economy integration. While *exploitative* practices—viewing biodiversity as a resource to be managed for economic benefit—remain dominant, *explorative* practices focus on creating value through regenerative and circular systems (Skene, 2021). Business schools often reinforce *exploitative* norms, aligning with economic growth paradigms embedded within the Sustainable Development Goals (SDGs), which, though well-intentioned, remain anthropocentric and limited in scope (Kopnina, 2020). This contradiction hampers the shift toward circular economic models, where biodiversity is not merely a resource but an integral part of resilient ecosystems that businesses depend on.

Nevertheless, growing interest in approaches like *emancipatory accounting for biodiversity loss* (Maroun & Atkins, 2018) and *nature-positive solutions* (Zu Ermgassen et al., 2022) illustrates pathways toward more *explorative* ambidextrous practices and circular economic practices that challenge the current *exploitative* status quo. Business education, through ecopedagogy and ecoliteracy (Orr, 1990; Kahn, 2010), plays a crucial role in fostering a deeper understanding of biodiversity and the circular economy, moving beyond economic utility toward systems thinking that prioritizes ecological regeneration.

Organizational Ambidexterity provides a valuable framework for understanding how businesses and educators navigate the complexities of ‘embracing’ (not just ‘balancing’) *exploitative* and *explorative* approaches. Reflexivity, enabled through ecopedagogy and ecoliteracy, encourages students, educators, and practitioners to critically understand and examine the paradoxical nature of their behaviours and broader systemic influences. Business education can shift from profit-centred goal setting to more ecocentric and circular benchmarks, where biodiversity conservation and regenerative practices become central to business success.

Moving Forward: Circular Economy, Curriculum Innovation, and Collaboration

To transform business education, the next phase of research must focus on translating theoretical insights into actionable steps for curriculum development that emphasizes circular economy principles. The development and integration of curricula reflecting ecocentric and circular economy approaches will address exploitative practices currently prevalent in both academia and business. By placing biodiversity and resource regeneration at the heart of business education, students can be equipped with the tools to foster sustainable innovation.

A key priority is to design and implement pilot curricula that incorporate circular economy, ecopedagogy, and ecoliteracy into business degree programs. Such curricula should encourage interdisciplinary learning, blending business studies with environmental science, ethics, humanities, and social studies, to provide students with a comprehensive understanding of biodiversity conservation and circular economic models. Pilot programs in selected universities would help assess how well students engage with and apply the concepts of circular economy and biodiversity, promoting feedback loops between theory and practice.

The integration of *social learning* theory into these curricula is critical for understanding how ecological knowledge is transferred and applied in business contexts. Collective learning processes within business schools, where students, faculty, and industry practitioners co-create knowledge, can drive the systemic change necessary for both biodiversity conservation and circular economy adoption. Embedding dialogic and reflective activities into curricula will foster collaboration and co-development of innovative business strategies that prioritize ecosystem health alongside economic goals.

Beyond academia, collaboration with industry is essential for embedding circular economy and biodiversity-focused practices into real-world business settings. By partnering with companies that are already implementing circular economy models and biodiversity initiatives, students can gain experiential learning opportunities that connect theoretical knowledge with practical application. These partnerships offer valuable case studies and learning experiences, preparing students to drive transformative change within their future professional roles.

Conclusion: integrating circular economy into business education

This article emphasizes the importance of integrating ecopedagogy, ecoliteracy, and circular economy principles into business school curricula. Doing so will enable students to critically engage with alternative economic models, such as the circular economy and degrowth, that decouple growth from resource consumption. Teaching these concepts facilitates transformative change, equipping future business leaders to prioritize biodiversity and ecological health over profit accumulation. Through the lens of Organizational Ambidexterity, we have highlighted specific paradoxical challenges within current business practices and the urgent need to move from anthropocentric models to more ecocentric and circular approaches via ambidextrous practices. The inclusion of nonhuman stakeholders in business decision-making is crucial to addressing biodiversity loss, as traditional profit-driven frameworks often overlook ecological imperatives. By fostering and further embracing reflexive and *explorative* approaches, business education can play a pivotal role in transforming how businesses operate concerning both the circular economy and biodiversity conservation. As we move forward, educators, students, and practitioners must collaborate in creating sustainable, regenerative solutions for business practice. Business schools have the potential to lead this transformation by embedding circular economy principles into their curricula, enabling a new generation of business leaders to make ethically sound decisions that benefit both human and nonhuman communities.

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The authors declare no competing interests.

Author contributions

Helen Kopnina: Conceptualisation, methodology, editing and writing.
Simon Smith: Conceptualisation, methodology, editing and writing.
Bastian Thomsen: Conceptualisation, methodology, editing and writing.
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