Between Real Change and Institutional Facade: Unpacking Operational Sustainability in English Universities.

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Structured Abstract:

Purpose: This research critically examines Operational Sustainability (OS) in English public universities, uniquely integrating neo-institutional and organisational legitimacy theories to explore the alignment of sustainability strategies with organisational practices.

Design/methodology/approach: Adopting a rigorous qualitative approach, the study combines semi-structured interviews with 20 OS managers and a thorough document analysis involving over 800 documents. This robust methodology ensures a deep exploration of institutional sustainability dynamics.

Findings: The study reveals a significant discrepancy between stated and actual sustainability performances, with institutions frequently engaging in symbolic sustainability efforts. It highlights the need for robust benchmarking systems to accurately measure and encourage genuine sustainability integration.

Originality: This study is original in its dual-theoretical approach, applying both neo-institutional and organizational legitimacy theories to dissect the complexities of sustainability in higher education. It extends the discourse on sustainability by scrutinising the often-overlooked gap between policy and practice, providing a nuanced understanding of institutional behaviours and pressures.

Practical implications: The identified barriers and the subsequent recommended approaches can guide public universities in their strategic planning and implementation of OS initiatives, ensuring more effective outcomes.

Social implications: The study underscores the importance of university stakeholders in shaping OS engagement. It signals a need for broader societal awareness and collaboration to truly drive universities toward a more sustainable future.

Keywords: Sustainability; Universities; Sustainable Development; SDG 4; Institutional Theory; Legitimacy Theory; Operational Sustainability.

Introduction

The adoption of the Sustainable Development Goals (SDGs) in 2015 has significantly shaped organisational strategies related to sustainability. The 17 goals serve as a comprehensive framework for addressing global challenges, including poverty, inequality, and climate change. Various motivations drive organisations to align their operations with the SDGs, such as compliance (Ma *et al.*, 2023), cost-efficiency (Angelaki *et al.*, 2024), meeting stakeholder expectations (Kolk, 2016), risk management (Qiu *et al.*, 2020), and reputation enhancement (Orlitzky *et al.*, 2003). Universities, while resembling large organisations in facing various pressures, have distinct characteristics. Their core missions encompass teaching, research, and knowledge exchange, necessitating addressing diverse stakeholder demands and multifaceted objectives (Bok, 2009). They operate within a dense regulatory framework and to secure resources in the competitive market, legitimacy among stakeholders is crucial. Significantly, given their expansive scope and activities, universities mirror "small cities", exerting a pronounced socio-environmental impact, often surpassing other organisations (Alshuwaikhat and Abubakar, 2008).

Alongside these drivers there are several education and higher education institution (HEI) focussed initiatives which establish global norms and expectations that create a conducive environment for HEIs to engage with sustainability. For example, the UNESCO Education 2030 Framework for Action adopted by 184 Member States, inspires universities to be at the forefront of addressing global educational and sustainable development challenges (UNESCO, 2016). Similarly the UN Principles for Responsible Management Education (PRME) initiative with its focus on cultivating future leaders capable of managing economic, social, and environmental challenges sustainably, parallels the Education 2030 Framework's call for inclusive, equitable quality education that promotes sustainable development (UNGC, 2017). Additionally, the approach of Education for Sustainable Development (ESD) emphasises action-oriented pedagogies (Lozano *et al.*, 2022) and the use of university campuses as living labs (Mazutti *et al.*, 2020), which facilitate the integration of these goals into higher education.

Despite these developments, evidence from the literature and interview data confirms that sustainability is yet to be systematically and holistically integrated within many HEIs. Where it does happen, the literature paints a fragmented picture, revealing a predominant focus on environmental sustainability and a side-lining of social concerns (Dagiliut and Liobikiene, 2015). One of the key considerations is who is responsible for sustainability in a university context (Leal Filho *et al.*, 2020). Whilst many HEIs will expect senior management to hold ultimate

responsibility (Iqbal and Piwowar-Sulej, 2022) the day-to-day management of the campus 'operational sustainability' (OS) more likely sits with professional service managers in estates departments (Washington-Ottombre and Bigalke, 2018). OS entails environmental management, fostering a wholesome campus atmosphere, conserving resources, minimising waste, and advocating for social justice and equity on local, national, and global scales. This includes initiatives related to carbon, energy, waste management, water, transportation, infrastructure, biodiversity, procurement, fair trade, investments, and equality. Yet, while many institutions pursue OS, questions remain about their thorough incorporation of sustainability and the efficacy of their initiatives (Aleixo *et al.*, 2018).

This research aims to develop an understanding of the motivations and challenges behind OS in English public universities, blending organisational and individual perspectives. Using a dual-theoretical framework of neo-institutional theory and organisational legitimacy theory, the study offers a comprehensive view of how organisational strategies and individual perceptions interact within the context of OS. This approach provides a broad analysis of sustainability drivers, contrasting with studies focused solely on managerial rationales or external pressures. It employs in-depth interviews with key managerial staff from English HEIs, uncovering detailed dynamics of OS initiatives often overlooked in broader surveys. It highlights the gaps between reported and actual sustainability performances, pointing out the need for a consistent benchmarking system in HEIs, as noted by Caeiro et al. (2020). Additionally, the research delivers practical implications and policy recommendations for integrating OS more effectively into university operations and considers the wider social and environmental impacts of sustainability, emphasising the pivotal role of HEIs in promoting societal sustainability goals.

Literature Review

Universities share many characteristics with other organisations however the scale of their operations and organisational complexity impact decision-making in relation to OS. The traditional missions of universities, encompassing teaching, research, and service, have evolved into more multifaceted objectives due to societal demands (Vefago et al., 2020). Modern universities have developed complex structures conformed of two subsystems, the academic and the administrative overlaid with diverse professional and managerial cultures complicating collaboration on interdisciplinary issues like sustainability (Rony et al., 2023) and making the holistic integration of sustainability throughout a university a challenge (Hernández-Diaz et al.,

2021). As such many are still focused on the environmental aspect of campus operations often neglecting more tricky economic and social aspects. Layerd onto this financial pressures clash with long-standing societal values (Grubnic and Ball, 2007). In the UK at least, a neoliberal approach to regulation and the marketisation of higher education has necessitated a shift towards business-oriented strategies, emphasising efficiency and market competition whilst governmental regulations have additionally exerted pressures, mandating strategic governance and the inclusion of various internal stakeholders (Bevan, 2023).

External institutional influences combined with internal organisational dynamics serve as catalysts for engagement in sustainability (Cristofoletti and Pinheiro, 2023). Without substantial external pressures, universities may be reluctant to fundamentally shift towards sustainability. External stakeholder groups, including national government bodies, international instructions such as the UN, funding providers, and professional associations, significantly influence universities' sustainability endeavours (D'Adamo and Gastaldi, 2023). Stakeholders, with varying demands, also exert influence on sustainability policies. Yet, some sustainability initiatives might be symbolic, addressing only minimum standards or stakeholder appeasement (Fatima and Elbanna, 2023). Internally, organisations often pursue sustainability for self-interest, such as regulatory compliance, cost efficiency, and reputation management (Engert et al., 2016) and there is evidence that universities prioritise reputation and image in their sustainability engagement (Singh et al., 2023).

The "win-win business case" for sustainability argues that organisations can achieve financial success while being socially responsible (Coelho et al., 2023). However, this notion is increasingly debated as some scholars call for a broader view of sustainability beyond economic gains. Molthan-Hill (2015) challenges the assumption that economic returns align seamlessly with sustainability, suggesting these are mere social constructs rather than fixed truths. Critics argue that this model often leads to superficial sustainability practices used for enhancing image and managing reputation (Peng et al., 2024). Furthermore, the literature points to a conflict within universities between short-term economic objectives and the long-term demands of OS. This short-termism, fuelled by profit motives, may inhibit sustainability investments, leading to a minimal prioritisation of sustainability issues (Smulowitz et al., 2023). Combined with an inherent conservatism in universities (Leal Filho et al., 2019) these factors contribute to ineffective OS initiatives.

A major obstacle to OS in universities is the insufficient leadership at senior levels, often delegating sustainability responsibilities to students or facility teams (Azizi, 2023). Financial constraints and the scarcity of dedicated OS staff, compounded by an overreliance on overwhelmed volunteers, also pose significant challenges (Ceulemans et al., 2015; Lozano et al., 2016). Additionally, a lack of OS awareness and a prevailing silo mentality hinder progress (de Waal et al., 2019). Ineffective regulations and lenient governmental policies further restrict OS advancement (Hinduja et al., 2023), with robust, mandatory regulations needed over voluntary measures. The absence of strong institutional mechanisms often results in only superficial OS commitments (Demastus and Landrum, 2024), and minimal sectoral pressure from associations, trade unions, and student bodies fails to drive substantial changes (Moggi, 2023). These factors collectively impede the deep integration of sustainability within university operations.

The COVID-19 pandemic also caused significant repercussions on university operations, including OS. Financial strains are evident with potential losses from reduced student numbers and decreased research and campus-related income (Bolton and Hubble, 2020). The UK higher education sector experienced an estimated £11 billion loss due to the pandemic, with some institutions facing insolvency risks (Drayton and Waltmann, 2020). Environmental challenges have also arisen with increased medical and domestic waste, leading to heightened environmental pollution (You et al., 2022).

Finally, adopting a whole institutional approach to sustainability is essential for universities aiming to cultivate a pervasive culture of sustainability throughout their operations, academics, and community engagement. This approach integrates sustainability into the university's governance, operations, curriculum, and research, aligning with sustainable development goals and avoiding isolated initiatives (Leal Filho et al., 2021). It facilitates systemic changes that enhance the university's ability to tackle complex sustainability challenges effectively. Studies highlight its benefits; for example, Odell et al. (2020) found that a coherent sustainability strategy significantly improves educational outcomes in sustainable development. Additionally, Pereira Ribeiro et al. (2021) showed that universities with robust campus sustainability strategies can more effectively influence and educate future sustainability leaders. Ultimately, by embedding sustainability in its core activities, a university not only transforms into a model of sustainable society but also significantly impacts its students and the wider global community.

Theoretical Framework

Neo-institutional theory provides a robust framework for analysing universities' motivations for engaging in OS, moving beyond traditional resource dependence to consider a broader spectrum of social influences. This theory underscores how universities respond to external pressures, such as government regulations (DiMaggio and Powell, 1983), and internal cultural norms to enhance their legitimacy and commitment to sustainability (Borgstedt *et al.*, 2019). It identifies three primary mechanisms—coercive, normative, and mimetic—that shape organisational behaviour, emphasising the interplay of legal demands, professional expectations, and industry best practices. Organisational legitimacy theory explains how organisations strategically respond to stakeholder demands to boost their perceived legitimacy. Influential entities like regulators, the media, and activist groups shape public and governmental perspectives, with the media swaying public sentiment and activist groups influencing both public opinion and policy (L'Abate *et al.*, 2023). In academic contexts, this theory helps analyse managerial decisions in sustainability, highlighting the importance of aligning organisational actions with societal values to enhance legitimacy and meet stakeholder needs.

Integrating organisational legitimacy theory with neo-institutional theory offers a multidimensional approach to organisational analysis. This synthesis promises a comprehensive understanding of sustainability challenges in higher education, particularly in the OS initiatives of English public universities. However, current literature indicates several areas for improvement. Criticisms of legitimacy theory focus on its broad societal approach, which often overlooks specific societal groups. There is also a notable lack of empirical studies on the strategies of legitimisation, both substantive and symbolic, within the OS realm in higher education. Moreover, while some research highlights theoretical barriers to advancing university OS, empirical investigations into these challenges are sparse, highlighting the need for more focused research to comprehensively critique and understand these barriers.

Methodology

This study investigates the drivers of OS engagement and the barriers to its progress at English public universities, as reported by key OS management personnel across various institutions. Previous studies relied on case studies of single HEIs or reviewed literature to identify common themes, while others used interviews with academics and students. This is the first study to use in-

depth interviews with professional service staff responsible for OS, providing a novel perspective on the challenges they encounter. The research was guided by two main questions: Why do English public universities engage in sustainability activities in their operations? And what barriers do these universities face in sustaining these activities, and how do these barriers impact their efforts?

A qualitative approach was selected to gain in-depth insights into the motivations and challenges faced by OS managers in English public universities. This method facilitated rich data collection and allowed for the identification of themes not easily captured through quantitative surveys. Semi-structured interviews were conducted with 20 OS managers from universities across England, chosen through purposive sampling based on factors such as institutional size and geographic location. The interviews, lasting between 40 and 72 minutes, were recorded, transcribed, and anonymized to ensure confidentiality. Further details of participants provided in Tables 1 and 2.

Table 1: Participant Information (Source: Authors own work).

Interviewee/ University	Position	Work experience	Gender
Pilot study			
1	Director of sustainability	over 20 years	male
2	Sustainability adviser (strategic)	over 10 years	female
3	Senior environmental officer	over 10 years	female
Main study			
4	Head of sustainability	over 20 years	male
5	Senior Environmental & Sustainability Officer	over 10 years	male
6	Environmental and Sustainability Manager	over 10 years	male
7	Sustainability Manager	over 10 years	male
8	Energy, Environment and Sustainability Manager	over 10 years	male
9	Environmental Manager	over 10 years	female
10	Sustainability Manager	over 10 years	male
11	Head of Environmental Sustainability	over 15 years	male
12	Head of Sustainability	over 20 years	male
13	Senior Energy & Sustainability Manager	Over 15 years	male

Interviewee/ University	Position	Work experience	Gender
14	Head of Environmental Sustainability	over 20 years	female
15	Head of Energy and Sustainability	Over 15 years	male
16	Sustainability Manager	Over 10 years	female
17	Head of Environmental Sustainability	Over 20 years	female
18	Associate Director, Sustainable Operation	over 15 years	male
19	Director of Sustainability Development	over 25 years	male
20	Sustainability Manager	Over 10 years	male

Table 2: University Sample (Source: Authors own work).

University	Established	Size	Annual income £M	Membership	location
Uni 1	1940s	30,000-35000	500-800	Russell Group	midlands
Uni 2	1992	25,000-30,000	200-300		north
Uni 3	1992	20000-25,000	200-300	University Alliance	south
Uni 4	1992	15,000-20,000	200-250	University Alliance	south
Uni 5	1992	25,000-30,000	200-300		midlands
Uni 6	post 2000	10,000	100-150	Million+	south
Uni 7	1992	15,000-20,000	150-200		south
Uni 8	1960s	10,000-15,000	150-200		midlands
Uni 9	1992	20,000-25,000	150-200		west
Uni 10	post 2000	5,000-10,000	50-100		southwest
Uni 11	19th century	10000-15000	300-400	Russell group	greater London
Uni 12	18th century	20000-25000	400-500	Russell group	greater London
Uni 13	19th century	15000-20000	350-450	Russell group	southeast
Uni 14	11th century	20000-25000	2000-2500	Russell group	south
Uni 15	1960s	25000-30000	600-700	Russell group	midlands
Uni 16	19th century	35000-40000	650-750	Russell group	midlands
Uni 17	19th century	40000-450000	1000	Russell group	midlands
Uni 18	post 2000	15000-20000	250-350		Greater London
Uni 19	post 2000	10000-15000	100-150		southeast
Uni 20	1992	20000-25000	150-250		midlands

The semi-structured format provided participants with the freedom to share their perspectives, while maintaining consistency in covering key topics related to internal and external pressures on OS strategies and barriers to implementation. To complement the interview data, an extensive document analysis of sustainability reports and strategic plans was conducted, offering additional context and helping to triangulate the findings. The type and number of these documents are set out in Table 3.

Table 3: Documents collected and analysed (Source: Authors own work).

Documents within universities	Number
University mission/vision/value statements	100
Sust Annual reviews/reports/accounts	100
University sustainability policies/strategies	70
Sustainability governance structure/management information	80
Sustainability-related reports	60
Carbon and energy reduction plans/programmes	45
Waste and recycling management programmes/policies	30
Water reduction programmes/policies	30
Travel and transport programmes/policies	30
Building/construction management documents relating to OS	35
Biodiversity policies/programmes	25
Sustainable procurement policies/programs	25
Fair trade policies/programmes/information	25
Ethical investment and banking policies	25
Equality and diversity policies/programmes	35
Environmental management system and audit information	35
Sustainability engagement programmes	25
Local student unions' programmes and websites	40
Total	**815**

External documents	
Laws, government policies, guidance, programmes and reports	11
Media news and reports	20
University sustainability league tables	3
Activist groups' programmes and websites	3
Consulting reports	3
Professional associations' documents, programmes and websites	10

Documents within universities	Number
National student unions' reports, programmes and websites	10
Total	**60**

The data were analysed using template analysis (Brooks et al., 2015), a method that provides a flexible yet structured approach for interpreting qualitative data. An initial coding template was developed based on the research questions and theoretical framework. As themes emerged during the analysis, the template was refined to capture the nuances of participants' experiences and perspectives (King, 2012). This iterative approach ensured that both predefined and emergent themes were systematically integrated into the analysis. Triangulation of interview data with document analysis further enhanced the robustness and validity of the findings. Ethical approval was obtained from the relevant ethics board, and informed consent was secured from all participants. Anonymity was ensured throughout the research process.

Findings

The findings are presented by research question using the participants' own words to bring the issues to life whilst discussing in context with the extant literature.

Research question one: Why do English public universities engage in sustainability activities in their (campus) operations?

Institutional Influences

The study reveals that universities' engagement in OS is shaped by normative, mimetic and coercive pressures consistent with institutional theory. Normative pressures largely come from students and their associated activist groups, who see OS as an ethical imperative. As an example, an interviewee pointed out:

> *"...The student demographic is becoming more vocal in environmental matters recently, particularly related to climate change. I think that is our strongest influence going forward".* (Interviewee 10)

Another reported:

"We have a Climate Action group and they're really consistent at emailing, particularly around financial transparency and fossil fuel divestment, but also around wanting clarity over what the university is doing on sustainability. They've been really helpful at keeping it high on the agenda of the senior bodies at the university that we need to keep addressing this. ..." (Interviewee 16)

This observation is consistent with prior studies such as Aguinis and Glavas (2012) on the role of normative factors in shaping OS activities.

Mimetic isomorphism is also a significant influence as universities tend to emulate the OS practices of their peers to reduce uncertainty and enhance competitiveness as one interviewee noted:

"Really, if something comes out and pretty every university is looking at it apart from yourselves, then maybe it's a bit of pressure there that we better start looking at that initiative.[...] I think it's you're able to get actual examples of success and failures, sometimes some universities have tried something new and then you have to see how that if it's benefited them". (Interviewee 8)

Similarly, there is a tendency for universities to benchmark against one another to understand how they may perform:

"Internally, the Vice Chancellor and the policy group are interested in what we [sustainability team] do, in particular how we compare with other peer organisations….we are always comparing ourselves to get an idea of how well we're doing in the sector just working out how you can get a competitive advantage" (Interviewee 4)

Mechanisms such as sustainability rankings and media coverage serve as indirect facilitators for mimetic influences from peer institutions.

"League Tables help with the PR [public relation] side of things.... initially, when they came out it was a driver to make sure that you could argue with universities to get things changed.... there is still that driver if you don't want bad press." (Interviewee 8)

University leadership prioritises organisational reputation, keenly attuned to the sway exerted by such rankings and media portrayals. For instance, positive standing in sustainability league tables compared to peer institutions influences a university's OS strategies.

> *"There are benefits in terms of reputation and also performance in relevant league tables and benchmarking exercises. Vice-Chancellors always love a league table. It also helps in terms of our own reputation, which in turn could improve our chances of recruiting students to come to our university."* (Interviewee 5)

Additionally, favourable media attention on a peer's OS activities can elevate that institution's appeal to prospective students. This dynamic, in turn, can prompt other universities to emulate those successful OS practices, thereby amplifying mimetic pressures to conform. This pattern has been previously observed in academic literature, affirming the role of mimetic behaviour among universities (Ullah *et al.*, 2020).

Regarding coercive pressures, literature identifies government and sector regulators as primary sources, enforcing through laws, regulations, and policies, as well as funding allocation (DiMaggio and Powell, 1983). However, participants reported diminishing governmental influence on universities' OS.

> *"...there is very little legislation. There was an aspiration that by now all commercial buildings would be zero carbon through the building regulations. The present government and the previous coalition watered that down, so we have made almost no progress whatsoever towards zero carbon buildings..."* (Interviewee 8)

Similarly, in analysing the implementation of environmental management systems, university documents indicated that insufficient enforcement could be a potential barrier.

> *"Lack of enforcement from regulatory bodies can make it difficult to demonstrate the need to comply"* (University Documents)

> *".... HEFCE is no longer around, but is replaced by the OfS, and university funding tends to come from individuals now rather than the OfS,... There has been quite a change in*

[governments] ability to influence what universities do, especially in relation to carbon management..." (Interviewee 5)

Despite this government-led voluntary guidance can also be an influential, albeit more benign source of coercive power.

"...it [government guidance] is not necessarily enshrined in law…. this is more of policy development, just like giving a framework for the business to work out how we're going to operate… … it will be guidance or will be best practice..." (Interviewee 7)

Nevertheless, the findings indicate that government influence often hinders substantive progress in OS within universities. A focus on cost-efficiency and short-term policy goals, coupled with a lax regulatory environment and underfunded initiatives, minimises the pressure on universities to enact meaningful change. Moreover, the ineffectiveness of voluntary guidance, in the absence of robust monitoring and enforcement, casts doubt on its potential to drive systemic improvements in OS.

Legitimacy seeking and organisational self-interest.

Institutional factors and university self-interest intermingle to influence managerial decisions regarding OS. The pursuit of organisational legitimacy acts as a mediator between external societal pressures and internal objectives, contributing to the rationale for OS engagement. This includes not only strategic legitimacy, as frequently discussed in sustainability research, but also a broader range of social and institutional influences. Despite their not-for-profit status, universities adopt OS practices for strategic reasons like those of private companies, including risk management, funding security, operational efficiency, student attraction, and reputation enhancement. The study indicates that university executives are particularly responsive to OS initiatives that are articulated within a business-case framework.

"...if we can demonstrate that what we do delivers tangible financial benefits, then we're more likely to be allowed to do that again in other initiatives". (Interviewee 7

However, this also acts as a barrier to the implementation of OS:

"If the [OS-related] business case's payback period is a lot longer, then the business case is difficult to push. We've got quite strict budgets, so it's difficult to argue that needed to put something in". (Interviewee 9)

This observation corroborates existing literature on sustainability activities across diverse organisational landscapes (Schaltegger and Csutora, 2012). Nevertheless, there's a distinct nuance: while private firms often prioritise shareholder value and profitability, public universities extend the business case to include considerations like cost savings and institutional reputation. This is why scholars such as Molthan-Hill (2015) caution against an undue focus on short-term, organisation-centric benefits, arguing that such an approach is unlikely to drive substantive sustainability changes. They advocate re-orientating the prevailing business case rationale toward public service and societal goals, as opposed to solely economic objectives.

The study findings indicate that universities consider government, students, media, and the public as key stakeholders that confer legitimacy.

"[speaking of] news media, I am thinking about reputation. When something is reported in the media about our university or other universities, it will no doubt be picked up within the university. Then, the university has to decide whether or not it's going to address it in a specific way". (Interviewee 6)

Universities align their practices with the expectations of influential stakeholders to secure regulatory backing, financial assistance, and sociocultural approval, aiming for long-term viability. They address government regulations to ensure operational stability, mitigate risks, and secure funding, while using OS to enhance legitimacy with students and the public, focusing on reputation, recruitment, and revenue. This strategy conforms to how organisations typically draw legitimacy from diverse sources. However, the pursuit of moral legitimacy for societal and environmental benefits often clashes with pragmatic interests like institutional growth and financial returns. Universities sometimes make compromises when these areas of moral legitimacy and organisational self-interest conflict, leading to tensions in sustainability management.

"The fact is the way universities are trying to grow, trying to recruit a certain number of students and improving the facilities all the time is often at odds with sustainability…. it's hard to say what the benefits are to the environment in the long run". (Interviewee 6)

This phenomenon becomes especially pronounced in scenarios where immediate, self-serving advantages are less apparent, or external coercive pressures are minimal (such as in sustainable procurement and ethical banking/investment practices). Additionally, universities occasionally partake in symbolic OS actions, aimed at superficially maintaining legitimacy. Encountered instances include highlighting relative instead of absolute carbon reduction metrics, often rationalised by organisational expansion; and implementing small-scale, short-term OS initiatives that target 'quick wins', 'easy paybacks', and 'low-hanging fruits', seemingly for public relations objectives and to placate stakeholders.

> *"...the perceived wisdom is that you do all of the quick wins, easy payback projects first in order to demonstrate that you're making savings, However, the consequence of that is that it leaves you with all of the difficult to do projects with long paybacks together to do. It makes them ever more difficult to complete because they're all more and more expensive."* (Interviewee 10)

Symbolic actions demonstrate a nominal level of commitment to OS without effecting substantial changes in their operations, ultimately amounting to mere symbolic gestures. Consequently, these activities yield limited substantive responses and have a minimal real impact on actual OS performance.

Research question two: What are the barriers encountered by public universities in England while engaging in sustainability activities in campus operations and how do these barriers affect OS progress?

Organisational-related barriers

The barriers that universities encounter whilst engaging in OS can be grouped under three topics: incompatibility of long-term vs short-term economic interests, organisational management/structures, and insufficient support from university executives. With respect to the first topic, we found a perceived lack of short-term economic benefits for engaging in OS at a time when university finances are severely under pressure. This made it almost impossible to invest in long-term sustainability initiatives especially in the areas where there are no direct, visible financial returns, such as sustainable procurement (being a fairtrade institution), engaging in ethical banking and investment, divestment from fossil fuels etc.

"...it's quite a difficult conversation to have sometimes, because finance departments and senior managers don't tend to look over five years, they will look for payback on a shorter period [...] The short-termism in a lot of cases in terms of investments I think is also a barrier to investing in larger-scale projects, especially in relation to energy and carbon emissions". (Interviewee 5)

Some universities primarily justify their reluctance to invest in long-term, large-scale OS projects by citing their lack of cost efficiency (Dahle & Neumayer, 2001). They argue that the financial savings from short payback initiatives are often redirected to other, more 'immediate' needs, rather than funding longer payback projects. Consequently, long-term sustainability programs tend to be neglected, as they rarely seem economically attractive to these institutions. However, considering that most public universities anticipate operating for an extended period, potentially spanning centuries, investments in long-term sustainability should be seen as justifiable.

Limited awareness and interest in OS pervade various university roles, exacerbated by a silo mentality that prioritises departmental goals over institutional aims (Ávila *et al.*, 2017).

"There is a lack of knowledge and understanding amongst staff and students. For instance…"(Interviewee 6)

"There's definitely a silo mentality within universities where people work up and down structures rather than across. That can certainly hold things back in relation to sustainability". (Interviewee 5)

The documentation also makes this clear:

"HR teams tend to consider sustainability issues to refer predominantly to waste and energy management, and struggle to see the relevance of the topic for their departments". (EAUC, 2019, p. 1).

"Awareness of staff and students on sustainability and sustainable development is still limited and the concept is not well understood by many."" (EAUC, 2017, p. 52).

As the literature suggests, such insularity hampers cross-functional cooperation, thus obstructing institution-wide sustainability efforts (Moggi, 2023).

Resource constraints further compound these issues. Specifically, inadequate funding and staffing make it challenging to meet OS objectives, aligning with prior findings on sustainability management barriers (Aleixo *et al.*, 2018).

> *"One barrier is if you don't have the personnel…. you're going to struggle to be able to deliver things if you've not got the people on the ground to be able to either directly implement policies or influence others to do so"*. (Interviewee 7)

> *"I think lack of time, probably within the sustainability team, might be a bit of an issue because obviously there's so many things that you want to do, and you can't do everything..."* (Interviewee 13)

These limitations appear more pronounced in teaching-oriented universities due to different income structures and budget constraints. A reliance on volunteerism and the already demanding commitments of university members often result in resistance to OS initiatives.

Lastly, respondents observed a low prioritisation of OS within universities, coupled with a lack of commitment from senior management, which hinders sustainability activities. This situation contributes to, or aggravates, other obstacles, including insufficient financial and human resces allocated for OS.

> *"I think based on that is a lack of sustainability understanding and commitment on behalf of the most senior management. [...] I think the senior management generally at universities is still of a past generation and they're in denial of the importance of sustainability"*. (Interviewee 8)

Consistent with what is indicated in the literature, the study reveals that corporate-style management approaches are widespread in HEIs. University administrators often behave more like corporate CEOs than traditional academic leaders, with many holding dual titles, such as 'CEO' and 'Vice-Chancellor.' As a result, senior executives with a business-oriented mindset are more inclined to support OS initiatives if they offer short-term cost-saving benefits (Barnes & Jerman,

2002). However, many OS activities, like composting and sustainable procurement, are perceived as yielding minimal tangible financial returns, resulting in a lack of sufficient management backing for their implementation.

Social institutional-related barriers

Respondents identified a significant decline in government enforcement and support as detrimental to OS initiatives. Historically a major driver of sustainability, the diminished role of government—characterised by reduced funding and less robust guidance—has led to weaker sustainability adoption and effectiveness, confirming neo-institutional theory's predictions about the effects of decreased governmental pressure. Moreover, respondents indicated that mandatory measures are more effective than voluntary compliance. Additionally, the influence of non-governmental social pressures, including sporadic advocacy from student unions and professional associations, has led to primarily superficial sustainability efforts. The relevance of sustainability rankings is waning, and students typically do not prioritise OS performance when selecting universities. This overall lack of external pressure results in largely symbolic OS practices, particularly in areas without immediate benefits. Furthermore, the COVID-19 pandemic has compounded these issues by exacerbating financial constraints and environmental challenges, such as increased waste, which obstruct further progress in OS initiatives.

> *" COVID-19 will not stop sustainability, but it will slow sustainability. For example, it is possible that we will not refurbish the same number of buildings very quickly. It will take more time to do things...".* (Interviewee 15)

The pandemic's negative consequences serve as an immediate impediment to the attainment of long-term OS goals, diverting financial and environmental resources away from sustainability projects. These outcomes are consistent with broader sustainability literature, revealing the challenges in maintaining environmental commitments amid crises.

Discussion

The research outcomes reveal the complexity of institutional mechanisms influencing OS in English public universities. It supports previous research on how coercive, normative, and mimetic pressures shape OS, consistent with neo-institutional theory. However, the findings also challenge

assumptions that such pressures always lead to substantive sustainability practices. For example, while normative pressures—particularly from students—encourage OS, coercive pressures from the government have weakened, leading to minimal regulatory enforcement. This contrasts with the traditional neo-institutional view that coercive pressures are a dominant force in institutional change (DiMaggio & Powell, 1983).

Organisational legitimacy theory similarly offers insight into universities' responses to sustainability demands. The findings show that universities frequently adopt symbolic OS measures to enhance their reputation, aligning their actions with stakeholder expectations to maintain legitimacy. However, these actions often fail to produce meaningful environmental or social change, highlighting a gap between the pursuit of symbolic and substantive legitimacy (Borgstedt et al., 2019). This observation echoes critiques in the literature, which argue that sustainability initiatives in higher education can be more performative than transformative (Molthan-Hill, 2015).

The integration of these two frameworks reveals a nuanced understanding of the tension between external pressures and internal Organisational strategies. Universities often find themselves balancing the demands for moral legitimacy, which align with sustainability principles, against strategic legitimacy, which prioritises short-term operational efficiency and market competition. This tension can explain why universities may simultaneously promote sustainability while engaging in practices that ultimately undermine these efforts. Moreover, the study highlights the role of institutional self-interest in shaping OS decisions. While universities, as not-for-profit institutions, have broader social responsibilities, they often approach OS using a business-case rationale, focusing on initiatives with clear financial benefits (tegger & Csutora, 2012). This short-term economic focus creates a barrier to more comprehensive sustainability efforts, particularly when longer-term initiatives lack immediate financial returns.

Conclusion

This study highlights the complexity of implementing operational sustainability (OS) initiatives within English public universities. It identifies significant institutional, managerial, and external barriers that hinder the holistic integration of sustainability into campus operations. The findings suggest that while normative and mimetic pressures can encourage sustainability efforts, the limited coercive pressures—due to weak governmental regulations—restrict universities from making substantial progress.

The implications for sustainability in higher education are clear: universities need to adopt a whole-institution approach that aligns sustainability efforts across governance, operations, curriculum, and research. By embedding sustainability into institutional strategies, universities can lead by example and foster a culture that promotes long-term environmental, social, and economic responsibility. This is particularly important considering the growing student demand for ethical and sustainable practices, which further reinforces the role of universities in shaping societal values.

The study is limited by its focus on public universities in England, which may not fully represent the experiences of private institutions or universities in other regions. Additionally, the reliance on interviews with OS managers may overlook the perspectives of other stakeholders, such as faculty, students, and external partners. Future research could expand the scope to include a broader range of institutions and stakeholders, as well as explore the long-term impacts of sustainability initiatives on university operations.

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