



## Sustainability in business and economics education in South African universities: Whose agenda is it?

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### ARTICLE INFO

#### Keywords:

Sustainability  
Education for sustainable development  
Higher education  
South Africa  
Faculty perspectives

### ABSTRACT

Education for Sustainable Development (ESD) has become increasingly significant in business and economics disciplines due to their focus on production, consumption, and economic policy. However, integration of sustainability into these curricula in universities remains uneven, especially in contexts like South Africa, where socio-political and economic challenges intersect with environmental concerns. This paper explores how faculty in South African universities understand, experience, and embed sustainability in business and economics teaching. Drawing on interviews with faculty from three institutions, we investigate definitions of sustainability, perceived barriers and opportunities, pedagogical strategies, and contextual influences. Findings reveal that sustainability is often viewed as peripheral, with understandings rooted primarily in economic concerns, complicated by limited student awareness, resource constraints, and lack of curriculum guidance. While some faculty demonstrate personal commitment to sustainability, their efforts are largely unsupported by institutional or governmental frameworks. The socio-economic context of South Africa, including poverty, corruption, and post-apartheid inequalities, shapes how sustainability is understood and prioritised, leading to tensions between economic development and environmental protection. Decolonisation and Africanisation efforts further challenge dominant western sustainability narratives. The study highlights the disconnect between international sustainability agendas and local realities, underscoring the need for contextually appropriate ESD approaches in business and economics. It offers original insight into how faculty negotiate complex educational, political, and cultural landscapes to embed sustainability in teaching, and contributes to the emerging body of literature on ESD in African higher education. Findings have implications for policy, curriculum development, and faculty support both within South Africa and other emerging economies.

### Introduction

Education for sustainable development (ESD) comprises a key strand of the international response to pressing environmental, economic, and social issues (Winter et al., 2022). Embedding sustainability in teaching requires delivering relevant content, drawing on approaches such as systems thinking, interdisciplinarity and critical analysis, and developing 'pedagogical innovations that provide interactive, experiential and real-world learning' (Lozano et al., 2017, p2). There is some evidence that higher education (HE) contributes to pro-environmental behaviours, with university attendance having a significant positive association with commitment to environmental sustainability when

compared to other adult transition pathways (Cotton & Alcock, 2012; Meyer, 2015). However, some argue that education can lead to the mindset that steers students toward an 'individualism, materialism and hyper-rationality' which ultimately leads to overconsumption of resources (Wals & Benavot, 2017, p 407). These issues play out differently in distinct contexts, and educational practice needs to be aligned with the audience it is targeted at (Olsson et al., 2022) indicating a need for research into how ESD is embedded in divergent disciplines and cultural settings (Wang, 2015, 65).

In South Africa there are well understood challenges to embedding ESD into HE curricula, in the context of a cultural landscape in which the relationship with sustainable development is an uneasy one. According

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to America (2014:2), "South Africa's sustainable development agenda is complex and multi-dimensional because persistent poverty, inequality, economic marginalisation and environmental degradation will continue to obstruct its development goals". However, arguably the social justice dimension of sustainability has been at the heart of South African (higher) education policies since the election of the ANC in 1994. The Constitution of the Republic of South Africa (1996) embeds sustainability by linking environmental concerns to human rights and social responsibilities (Tiese & le Roux, 2016); and this narrative is repeated in subsequent policies (White Paper for Post School Education and Training, 2013; Policy Framework for the Internationalisation of Higher Education in South Africa, 2019) but without the explicit mention of sustainability or sustainable development. This terminology arrived with the advent of the Sustainable Development Goals (SDGs) in 2015, of which South Africa was an early adopter, and it has been critical in articulating the HE sector's approach to sustainability. Since then, several authors have noted a growing enthusiasm for universities embedding sustainability through teaching and research (Awuzie & Emuze, 2017; Nyika, 2024; Teise & le Roux, 2016), but studies examining how these aspirations are operationalised remain limited (Saudelli & Niemczyk, 2022). Instead, research suggests that sustainability efforts in universities are primarily focused on institutional initiatives rather than embedding sustainability meaningfully into teaching and learning. This is due to a mix of factors: institutional initiatives can have cost-saving benefits in a climate where state funding for core operational and capital expenses is in sustained decline, there are no national or long-term funding strategies for ESD, and outside of professional and regulatory bodies there is little guidance on how to operationalise ESD (Saudelli & Niemczyk, 2022).

The literature identifies several abstruse issues influencing the teaching of sustainability in South African HE. While ESD elements are present in policy, Teise and le Roux (2016) stress the need to translate these into actual classroom practices. This requires faculty to be aware of and actively implement these elements in their teaching. However, there are currently no guidelines on curriculum development pertaining to ESD or the SDGs at a national government level (Department of Higher Education) or the Council of Higher Education. Nyika (2024, p 193) states that "few institutions have frameworks and policy guidelines to assist curriculum development" to include the SDGs. Educators are generally left to figure out how to include SDGs in the absence of knowledge, skills and understanding of the 'what, how and for whom' of SDG inclusion in their curriculum. Feinstein et al. (2013) note the lack of prioritisation for ESD in the curriculum and teacher training leading to its poor integration within universities. However, faculty are recognised as critical to the aligning of sustainability and disciplinary content (Cotton et al., 2007; De Aguiar & Paterson, 2018).

There has been little research in South Africa which considers how ESD is embedded into business and economics curricula, though drivers for change are strong. Internationally, there has been increasing recognition that sustainability-related content needs to be incorporated into business disciplines, especially MBA programmes (Craig & Karabas, 2025; Stubbs & Cocklin, 2008). Business education offers a crucial context for ESD research and practice since it focuses on production, allocation, use of goods and services, and organisational management and decision-making. The Principles for Responsible Management Education (PRME), developed in 2007 under the auspices of the United Nations (UN, 2007), promote an alignment with the UNs, 2015 Sustainable Development Goals (SDGs) in business and management courses (Martinez-Bravo et al., 2024). In parallel, the UN Global Compact LEAD initiative fosters corporate sustainability leadership, encouraging business schools to embed ethical decision-making (UN Global Compact, 2011); and the European Foundation for Management Development (EFMD) and the Association to Advance Collegiate Schools of Business (AACSB) have revised accreditation standards to ensure business education aligns with sustainability principles. Similarly, the integration of sustainability into economics education has been

influenced by several global initiatives. The UN SDGs, particularly SDG4 (Quality Education) and SDG8 (Decent Work and Economic Growth), encourage the incorporation of sustainability into economics curricula (United Nations, 2015). The Dasgupta Review (2021) advocates embedding biodiversity and natural capital into economic models, and the Network for Pluralist Economics calls for a more inclusive and sustainable economics education. These initiatives encourage a shift from conventional approaches which prioritise growth-centric teachings to a more sustainability-oriented approach underpinned by a triple-bottom-line perspective, with the intention that future graduates are better equipped to address complex sustainability challenges.

Running parallel to these international developments have been significant changes to the business sector within South Africa over the last two decades including important policy updates that have promoted sustainability in business and economics teaching in HE (America, 2014). According to the South African King III Report on Corporate Governance, sustainability is:

"One of the most important sources of both opportunities and risks for businesses. Nature, society, and business are interconnected in complex ways that should be understood by decision-makers. Most importantly, current incremental changes towards sustainability are not sufficient – we need a fundamental shift in the way companies and directors act and organise themselves" (Institute of Directors South Africa 2009, p.11).

Previous King Reports have required companies to implement sustainability reporting as a vital component of corporate governance (Institute of Directors South Africa 2009). With the help of the Socially Responsive Investment (SRI) Index, sustainability reporting has become widely accepted in South Africa since 2002 (Institute of Directors South Africa 2009). Rather than separating sustainability from financial reporting, the King Report III calls for greater integration within organisations reporting mechanisms of both environmental and economic sustainability (Institute of Directors South Africa 2009). This requires that business and economics graduates have the knowledge and skills to enable such reporting.

Despite the need for new ways to conceptualise and integrate ESD within organisations and educational curricula, transformative approaches to sustainability are not yet central to business and economics education in South Africa (America, 2014; Marx & van der Watt, 2013) – or indeed internationally (Narong, 2025). In spite of a growing awareness of business's positive role in achieving sustainability (Delgado-Ceballos et al., 2023), a neoclassical or 'single bottom-line' worldview continues to dominate. Alternative economic paradigms which may expand students' understanding of 'good' business are rarely taught, as ESD is not explicitly structured into the business curriculum in South Africa (America, 2014). One exception to this is the area of sustainable entrepreneurship which has been a growing focus of research in South Africa (Sathyinand et al., 2025), and internationally (Vargas-Merino et al., 2025). Seen as a response to the extremely high youth unemployment rates in South Africa, sustainable entrepreneurship offers opportunities to bring together business skills and sustainability literacy. However, the emphasis of much of this research draws more strongly on the entrepreneurship element than the sustainability component, and it has largely focused on students' perspectives rather than faculty (e.g. Kimanzi, 2020). There remains a gap in the literature around research focusing on faculty perspectives and with an emphasis on embedding ESD in the curriculum of business and economics disciplines. Further, Narong (2025) calls for more research from less developed regions, together with increased international collaboration to address pressing global sustainability challenges. This study explores the ways in which faculty in business and economics disciplines embed sustainability into HE curricula in South Africa, offering a deeper understanding of this under-explored research area, as well as producing insights which may be transferable to other emerging economies.

## Conceptual framing

ESD has been conceptualised in multiple ways, often based on models of sustainable development such as the three pillars (environmental, social, economic) or concentric circles (with the economy nested within society, and both within the environment) (Giddings et al., 2002). More recent approaches, however, emphasise systems thinking, complexity, and the interconnections between different elements of sustainability, justice, and decolonisation (Lotz-Sisitka et al., 2015; Sterling, 2012). Across this literature, there is growing recognition that ESD in higher education requires more than simply adding sustainability topics to curricula; it necessitates pedagogical approaches that foster critical reflection, transformative learning, and the development of sustainability competencies (Barth et al., 2007; Wiek et al., 2011).

Transformative learning theory (Mezirow, 1997, 2000; Cranton, 2006) provides a useful lens for understanding the deeper learning processes involved in sustainability education. It posits that individuals hold “frames of reference”—worldviews shaped by culture, socialisation, and prior experience—that influence how they interpret information and make decisions. Transformative learning occurs when these frames are critically examined, often through disorienting dilemmas or reflective dialogue, leading to revised perspectives and potentially changed behaviours (Taylor & Cranton, 2012). In the context of ESD, transformative learning is crucial because sustainability challenges frequently require questioning dominant assumptions about growth, consumption, and human–environment relations, as well as engaging emotionally and ethically with uncertain futures (Sterling, 2012; Winter et al. 2015).

Closely linked to transformative learning are the sustainability pedagogies that shape how critical and reflective learning can occur in practice. Cotton and Winter (2010) argue that embedding sustainability in HE requires moving from transmissive, lecture-based teaching to participatory, experiential, and learner-centred approaches. They highlight methods such as debate, role-play, critical incidents, case studies, problem-based learning, and personal reflection, all of which aim to engage learners cognitively, emotionally, and practically. This is described as the “head, hands, and heart” of learning by Sipos, Battisti and Grimm (2008). These pedagogies aim to foster not only understanding of complex socio-environmental systems but also the motivation and capability to act, making them particularly relevant in disciplines such as business and economics, where decisions have far-reaching social, environmental, and economic consequences. However, Cotton and Winter emphasise that institutional, disciplinary, and resource constraints often limit pedagogical innovation, a point particularly salient in the South African context where inequalities, competing developmental priorities, and decolonisation imperatives may shape the possibilities for curriculum reform.

Finally, the literature on sustainability competencies highlights the knowledge, skills, and values learners require to address sustainability challenges effectively (Barth et al., 2007; Wiek et al., 2011). Key competencies identified by Wiek et al. (2011) include systems thinking, anticipatory thinking, normative reasoning, strategic problem-solving, and interpersonal collaboration. Developing these competencies demands pedagogies that allow students to critically analyse problems, envision alternative futures, and engage in collaborative, values-based action. In settings such as South Africa, where sustainability is intertwined with socio-economic inequalities, political transformation, and cultural diversity, fostering such competencies requires contextually sensitive approaches that recognise both local realities and global sustainability agendas.

Taken together, these conceptual lenses provide sensitising concepts (Blumer, 1954) to inform our exploration of how business and economics faculty in South African universities understand and integrate sustainability into their teaching.

## Methodology

This research aimed to investigate the understandings of sustainability and its relationship to the discipline held by lecturers (faculty) in Business and Economics in three South African universities. It explored the following research questions:

1. How do lecturers in Economics and Business disciplines understand sustainability in the context of their discipline?
2. What opportunities and barriers do they perceive?
3. How do they report integrating sustainability into their teaching?

The research utilised an instrumental case study approach (Stake, 1995), involving semi-structured interviews undertaken in 2023–24, in three South African universities, incorporating traditional and Technikon institutions.<sup>1</sup> A qualitative research approach was felt to be more suitable for exploring understandings and perceptions of integrating sustainability into teaching. There is also some indication that participation in qualitative research about sustainability in HE can enhance self-efficacy and be a positive experience for participants (Winter & Cotton, 2012).

In keeping with the instrumental case study approach (Stake, 1995), the universities were purposively selected to provide diversity in institutional type, geographical location, and scale of business and economics education provision. The sample incorporated both traditional and university of technology institutions located in different provinces, each with a substantive undergraduate business and economics programme representing approximately 10 % of total student enrolment (see Table 1). This purposeful selection enabled exploration of the

**Table 1**  
Universities in sample.

Criteria	University 1	University 2	University 3
Educational Focus	Comprehensive university offering a wide range of programs	Focus on technology and applied sciences	Focus on technology and applied sciences
QS World University Rankings (2024)	801–1000	Not Ranked	Not Ranked
Times Higher Education (THE) World University Rankings (2024)	601–800	Not Ranked	Not Ranked
Type of University	Public Traditional	University of Technology	University of Technology
Number of Faculty	Over 1300	Around 800	Around 1200
Number of Students	Approximately 46,539 students	Approximately 33,000 students	Approximately 34,000 students
Number of Students Studying Business and economics	Approximately 6200 students	Approximately 2500 students	Approximately 3000 students
Geographical location	KwaZulu-Natal province	Western Cape Province	KwaZulu-Natal province

<sup>1</sup> Public universities in South Africa are divided into three types: public traditional universities (11), which offer theoretically oriented university degrees; universities of technology (8), which offer vocational oriented diplomas and degrees; and comprehensive universities (6), which offer a combination of both types of qualification.

research questions across varied higher education contexts, ensuring that findings would speak to the broader sector rather than to a single institutional case.

Ethical approval was obtained through both UK and South African authors' institutions prior to data collection. In total 11 faculty participated, 6 males and 5 females who represented multiple ethnicities including Black African, White African and Afro-Asian. Recruitment took place via gatekeepers at each institution who arranged initial access, supplemented by snowball sampling when initial interviewees suggested relevant colleagues for inclusion.

Data collection was conducted in South Africa in person and online via TEAMS and took place in English. Informed consent was provided verbally by participants at the beginning of each interview in response to an information sheet. Care was taken to ensure anonymity for the participants. The interview schedule had been piloted previously in other international contexts (Winter et al., 2022) and was reviewed for comprehensibility in South Africa. The interviews introduced faculty to a list of sustainability-associated concepts and asked them to identify the extent to which these were embedded into their teaching (See Table 3). As in previous research (Winter et al., 2022), definitions of sustainability, and of the concepts were not provided. This allowed respondents to articulate their own culturally relevant conceptions of sustainability as related to their discipline. In addition to the exploration of concepts, the interviews explored personal beliefs about sustainability, professional views on access to resources, curriculum content, pedagogy, and student engagement in relation to teaching about sustainability. Each interview lasted between one and two hours and was digitally recorded and transcribed.

This study adopted an inductive, exploratory approach in line with qualitative traditions that privilege participants' perspectives over a priori theorisation (e.g. Braun & Clarke, 2006; Charmaz, 2014). Rather than testing a predefined theoretical framework, the aim was to generate insights grounded in participants' experiences, which can inform future theoretical development. Analysis was undertaken by the research team, starting with a review of key project documents and aims to produce an initial coding frame. This was subsequently expanded using codes which emerged inductively from the first few interviews. The coding frame was agreed by all; coding was undertaken independently and then compared, resolving discrepancies through discussion. Initial codes were simple and descriptive, intended primarily at sorting the data for further analysis. Analytical memos were written and retained alongside the coded data throughout this stage. The second stage of analysis involved a rigorous thematic analysis using the constant comparative method to draw out cross-cutting themes (Silverman, 2005). The collaborative analytic process involved reading and re-reading data within and across codes, mapping against the research questions and looking for similarities and relationships between phenomena to create robust understandings about faculty beliefs and practices.

There are two notable limitations of this study. The first is the relatively small sample size, and the second is that the universities studied do not represent all types of South African HE institutions. Clearly the views expressed by participants cannot reflect the totality of the South African HE sector; however, they do offer useful insights into the experiences of faculty at these universities, set within their cultural context. With a growing global sustainability imperative, and the very real consequences of unsustainable business and economic practices salient in South Africa (Lotz-Sisitka et al., 2020), what happens in these universities is of interest and given the limited research on faculty perspectives and practices, the research findings offer original insights.

## Results

The findings are structured around the research questions and complete dataset. Each question has 3–5 main themes which reflect trends in the data collected (Table 2). The following section presents themed data under sub-headings to address the research questions.

**Table 2**

Key themes from analysis.

Research Question	Themes
1) How do lecturers in Economics and Business disciplines understand sustainability in the context of their discipline?	<ul style="list-style-type: none"> <li>Sustainability seen as a peripheral concept in these disciplines</li> <li>Faculty understandings of sustainability often had a strong economic angle</li> <li>Understandings of sustainability were explicitly context-dependent</li> <li>Government and university policies were viewed as weak drivers for sustainability</li> <li>Enthusiasm and knowledge of individual faculty drives integration of sustainability in teaching</li> <li>Students have limited knowledge about or interest in sustainability</li> <li>Resources for teaching sustainability could be limited</li> <li>Economic/social issues are prioritised over environment</li> <li>Faculty tried to make sustainability relevant to students</li> <li>Faculty used local case studies and resources to supplement textbooks</li> <li>Faculty negotiated resource issues to enable some interactive teaching about sustainability</li> </ul>
2) What opportunities and barriers do they perceive?	
3) How do they report integrating sustainability into their teaching?	

### RQ 1) how do lecturers in economics and business disciplines understand sustainability in the context of their discipline?

#### *Sustainability seen as a peripheral concept in these disciplines*

There were very varied understandings of sustainability across the participants, however, a general sense of sustainability as peripheral emerged from many of the interviews. Sustainability concepts which resonated most with this group included Corporate Social Responsibility (see Table 3), epitomised in the following quote as:

What are they doing for the community? What are they doing for the environment? (SA1)

Interdependence of society, economy & environment, and Ethics were also felt to be important, but overall sustainability was not felt to be core, or in-depth in the discipline:

*We do talk about trade, but we do not really get into the issues of Fair trade, the ECP [ethical consumerism and production] because we just introducing the concepts. (SA6)*

Many respondents had encountered sustainability later in life, either within postgraduate education or as a lecturer (it was covered little in

**Table 3**

Sustainability Concepts Ranked by respondents.

RANK	SA CONCEPT
1	Corporate Social Responsibility
2	Interdependence – society, economy & environment
3	Ethics and morals
	Growth
	Climate change
	Quality of life, equity and justice
	Intercultural understanding
4	Human capital
	Citizenship and stewardship – rights and responsibilities
	Green economy
5	Population
	Carbon trading
6	Fair trade
	Sustainable change – development and carrying capacity
	Polluter pays principle
	Needs and rights of future generations
7	Biospheric carrying capacity
	Circular economy

the school curriculum) – thus their views of the discipline were not set within this frame, and sustainability concepts were considered optional extras:

*We are just introducing the basic concepts to them right? But it's not linked to sustainability in any way. (SA6)*

The decolonisation agenda which is central to the SA political identity underpinned the explicit rejection of a western-centric perspective in favour of a more indigenous understanding:

*Some African cultures, they're very traditional ... To speak to them about a willingness to pay, or perhaps even more pertinent if they're willing to suffer loss or move from their ancestral land because there's a mining company which wishes to use the land ... They completely reject any notion of that mechanism, and it's because they are so closely tied to the land, they could never comprehend leaving the land because that's where their ancestors live. So it's a complete rejection of any neoclassical thinking that we may have (SA10)*

Sustainability was also seen as potentially controversial, especially where it touched upon issues of inequality which might bring in racial elements:

*Employment relations are quite controversial. It is quite because in our context, race is still a hugely controversial issue in terms of wealth distribution, in terms of access to jobs etc. (SA11)*

#### *Faculty understandings of sustainability often had a strong economic angle*

Not all participants were confident there was an appropriate definition of SD, and environmental sustainability was sometimes perceived as a theoretical subject with little relevance to the discipline:

*It's very intellectual, very theoretical. Unless you're in environmental health or health sciences, you don't talk about environmental sustainability. (SA3)*

Faculty did not use the term sustainability much in their teaching, though they often drew on related concepts. When asked, they outlined a diverse range of understandings of sustainability, more closely aligned to economic elements, for example 'business continuity', 'adding value' and 'making profits'. They also talked about development that is 'long lasting', ensuring that a company can 'make profits' while 'acting responsibly'.

Links to poverty and social justice were seen as crucial in the South African context, as was consumer sovereignty:

*We speak about consumer sovereignty as being a useful tool because you can elicit willingness to pay and monetary valuation is one of the backbones of environmental economics (SA10)*

Only one participant explicitly used the Brundtland definition (WCED, 1987). There were some references to the SDGs though relatively few. In other places the SDGs were mentioned but as a government policy, again as though this were peripheral. There were also respondents who felt that the philosophy of sustainability was somewhat in conflict with standard economic thinking:

*It doesn't strongly portray the notion of equity versus efficiency. So it's far more of an equity problem than an efficiency problem. But many economic models focus on efficiency ... So we're talking about poverty, which is key in a developing country like South Africa; if we could just look after poverty alleviation and equity first, you may go a long way. (SA10)*

There was a distinct sense that models from neoclassical economics were poorly suited to South African realities. Another respondent described the current Capitalist model of development as 'completely unsustainable' (SA11).

#### *Understandings of sustainability were explicitly context-dependent*

As hinted at in the previous section, several participants talked about how issues of poverty and inequality overwhelmed concern for the environment:

*For me, sustainability is not about saving the environment. It's about saving people ... Right now when you can't put food on the table, you don't*

*care about whether you're polluting the environment (SA3)*

There were also quite specific local issues in South Africa which emerged consistently as concerns for participants which focused their interests on sustainability. Key issues included pollution, water shortages and load-shedding (planned power outages to manage electricity demand which can last for up to 12 h):

*So when you run a business, for example, don't just think about making profit, think about looking at a shortage of water. In South Africa, we are experiencing water shortages, we have load-shedding energy shortages (SA7)*

*I come from an area where companies like Shell and Chevron pollute our water, land, and it affects us a lot.... To calculate GDP accurately, we must account for everything. But in doing this calculation, we don't account for the externalities of production, negative externalities. (SA5)*

Another recurring issue which respondents discussed was the very high local unemployment rate. This led to a strong focus on entrepreneurship and job creation, and gave a practical, applied focus to the discipline:

*We've got high youth unemployment which actually makes South Africa an unsustainable society because our youth is unskilled and many are unemployable, which is not a PC way of putting it, but they don't have skills for the job market, which is a huge problem. (SA11)*

Another commonly raised issue was corruption. This was seen both as a topic for inclusion in teaching, but also something students needed to be prepared for in their working lives. Corruption was also linked to sustainability issues: lack of solar power and thus energy shortages, for example, owing to the political influence of pro-coal lobbyists.

#### **RQ 2) what opportunities and barriers do they perceive?**

The majority of responses to questions in this area identified barriers rather than opportunities – and there was sometimes overlap between the two, so although questions were asked separately in interviews, the responses have been combined in this section.

#### *Government and university policies were viewed as weak drivers for sustainability*

There was strong aspirational support for integrating sustainability into the HE curriculum, in recognition that it was important for students:

*This is the next generation so at some point we've got to start making changes and taking those steps ... we need to start creating that awareness amongst students (SA3)*

Some respondents also felt that sustainability was (or should be) central to the economics discipline, and a few made reference to drivers from the international community (e.g. the SDGs), the South African government, or from university management:

*Today, almost every economist would want to pursue those goals. The 17 goals are very, very important (SA5)*

*I think it's more of an institutional mandate. Overall guided by the Department of higher education and training. So the government, but coming down it's more institutional mandates (SA5)*

However, in practice, many felt that there was limited focus on sustainability at their institutions and decisions were often made at a departmental level based on available resources:

*The very first time the VC mentioned the SDGs, I was so excited! But I think we get forgotten somewhere along the line, it's mentioned but it's not implemented (SA9)*

In addition, the sense that international movements in sustainability were misdirected, or that the government were not altogether serious about sustainability, remained an underpinning theme:

*In some universities, you'll have sustainability. And probably in our more traditional universities you will have faculties that drive it, but our government is not concerned with sustainable development. You know they do lip service to it. (SA11)*

Participants recognised that the sustainability imperative often reached universities through guidance from the Department of

Education, but that institutions were left to interpret this as they wished. This led to different responses: in one institution sustainability was being built into a graduate framework, in others it was left to individual staff to respond as they saw fit:

*The institution says we have to teach the students some sustainability. So, the way we implement it is the way we've done it all our lives (SA2)*

#### *Enthusiasm and knowledge of individual faculty drives integration of sustainability in teaching*

Decisions about including sustainability content in teaching were generally dependent upon the enthusiasms of individual faculty rather than being prescribed by government or university management:

*If an individual faculty thinks that sustainable development is important, it's far more likely to be brought in if they don't. (SA7)*

Curricula were developed collaboratively by the programme team, institution, Department for Education, and relevant professional bodies. Once a programme is validated, educators usually have a degree of autonomy in deviating from core content. This differed across the 3 locations, being described by one as 20 % changes allowed (SA1) and another as 'minor amendments' (SA6):

*You're trying to conform to a certain extent with what the university tells you, so these are things we have to tick boxes for. And then they let us to a certain extent decide, how are we going to implement? (SA3)*

There was a clear link between faculty understanding of sustainability and their perceptions of embedding it. For example, one respondent with a Masters in Environmental Economics gave an articulate description of how sustainability was embedded in their teaching, whilst another claimed they did not embed it, yet went on to discuss several relevant concepts which did appear in their teaching. Even in areas where sustainability might have played a core role in teaching, this was not automatic:

*We do teach environmental economics at the second year level and the first year level, but we don't speak about the concept of sustainable development (SA10)*

Relatively few of our respondents had any significant expertise on sustainability, and many found the contested definitions alienating. Since most had learnt little about sustainability in school, and lacked a shared definition of sustainability, they found it difficult to include in teaching:

*The lack of clear definition is a problem – because what is the deliverable you are trying to achieve? Which goal can you actually embed in this module? (SA4)*

A number of respondents talked about resistance to change. There were simply too many different agendas which faculty were trying to juggle, little time available, and curriculum development was not seen as a priority:

*I tend to find people don't like change .... It's taking them out of their comfort zone because they're forced to think about things differently, and if they've been using this way of teaching for the past 10 years, they just want to stick to it. (SA1)*

Overall, it was felt that faculty had a lot of control over the curriculum but unless they were 'passionate' about the topic, they might avoid introducing the concept of sustainability.

#### *Students have limited knowledge about or interest in sustainability*

A barrier to teaching sustainability frequently mentioned by respondents was the fact that students had poor knowledge about, and were uninterested in, sustainability. This is in part connected to the lack of sustainability content in the school curriculum, but it was also said to reflect the poor-quality pre-university experiences of some students:

*Their understanding of the world generally is limited, so when I speak about global warming, I've actually got to check that they've heard of it before, which may sound quite amazing to you and I, [but] their general knowledge of the world around them is poor ... So when you speak about an*

*environmental problem and the wider philosophical ideas that we've spoken about today they can draw a bit of a blank because they've just never thought about it. (SA10)*

*The awareness is very limited, they come from schools where it's just about getting them through the schooling system and we've also got an issue with our teachers. A lot of our teachers can't pass the subjects that they teach. (SA11)*

In addition to a lack of knowledge, there was little sense that sustainability was a major concern for most students. Understandably, many had more immediate issues which impacted on their lives:

*I think if you speak about sustainability, maybe looking at the context in which they live, how they can make a change, it's something that is probably not a priority for them. (SA1)*

An intriguing claim was made by one participant, suggesting that sustainability was in effect nobody's agenda, for reasons either of wealth or poverty:

*People with money and education in private schools and tutors are totally not worried about sustainability, because they'll be able to insulate themselves and make more money. And for us, it doesn't matter because it's not a real issue ... Which then makes us wonder, whose agenda is it? (SA3)*

Overall, there was little evidence of students acting as a driver for inclusion of sustainability in the curriculum, which combined with weak institutional/ governmental drivers meant the likelihood of inclusion was low.

#### *Resources for teaching sustainability could be limited*

The limited knowledge about sustainability of faculty and students meant that resources such as textbooks took on an additional importance. Textbooks played a crucial role in curriculum design, often serving as the foundation for other materials including journals, policy documents and grey literature – but they were frequently weak on sustainability content:

*To find a mainstream economics textbook, perhaps at the 1st and 2nd year level, which has enough about sustainable development to make it a topic worthy of addition to the module outline [is difficult]. If that doesn't exist, we won't teach it (SA10)*

Textbooks tended to be published in Europe and participants described how these had more recently been 'Africanised', meaning that African case studies had been included to exemplify content. Increasingly, the decolonization agenda had prompted government to mandate that textbooks must be of African source unless alternatives were not available, although differences of opinion emerged about how easy it was to find local textbooks.

When prompted, most faculty felt strongly that textbooks (either African or international) were insufficient in sustainable development content:

*It's a national and local textbook. It has nothing about sustainable development in it (SA6)*

Teaching and assessment were often structured around a specific book:

*Because [the textbook] doesn't allude to sustainable development, it's hard to include it and make it examinable. And if it's not examinable, students switch off and they don't listen to you (SA10)*

Faculty who used journal articles found more relevant information, but access could be difficult. There were also practical constraints to including sustainability in teaching which included the unreliability of power supplies and large class sizes:

*The 1st and 2nd year level, we have very high numbers. We used to have about 1500 first years in the programme ... To get them to write something which is not plagiarised or copied off the Internet and plagiarised between each other has got so difficult (SA10)*

#### *Economic/social issues are prioritised over environment*

As noted previously, the socio-political context of South Africa meant that sustainability was not necessarily considered an issue with the same

urgency as more immediate concerns such as unemployment, food supply, inequality and corruption:

*You don't care about fossil fuels or carbon footprint. Not when the unemployment rate's sitting at 50 %. (SA3)*

*The majority of our population is just concerned with feeding themselves and they don't have the time to worry about sustainable development (SA11)*

Whilst there was a perceived international pressure on the South African government to do something about climate change as the '13th largest emitter' (SA10); within the country, the pressures were much more on infrastructure failings, poverty alleviation and inequality. Environment and development were generally seen as being in conflict rather than having any shared purpose:

*You see, because there's a lot of poverty, right? And we if we just try to take the textbook approach of sustainability, we might even increase the poverty gap. (SA6)*

*So it's really the classic trade off between development and environment (SA10)*

There were also more direct ways in which the social issues in South Africa impacted on teaching in that students might have very poor living conditions or resources for educational engagement – so this provided an immediate and obvious issue with more saliency than sustainability:

*They come from houses where, for example, there's one computer in the house or one of my students, her house, burned down. ... She lives in basically what you would call a garden shed. (SA11)*

### RQ3: How do faculty report integrating sustainability into their teaching?

The extent to which sustainable development was incorporated into an individual's teaching was dependent on an interplay of their personal interests, any institutional mandate, perceived relevance to the core curriculum, the accessibility of material within textbooks and availability of local case studies. The themes below illustrate steps faculty took in an effort to incorporate sustainability into teaching, and to engage students with sustainability issues.

#### Faculty needed to make sustainability relevant to students by linking to their future lives

Faculty perceived themselves as having a stronger interest in sustainability than students, so they found ways of making it relevant. This included simply using examples which would resonate with their students (including load-shedding, energy use etc.), and trying to incorporate skills which would make them more employable:

*It's about finding examples that are relevant to them ... They will slaughter, for example, a cow right? And every single part of the cow gets used ... So you use that as an example of sustainability, the whole Circular Economy, recycling. (SA3)*

Links to media or social media stories could also be used to support student engagement:

*Flooding is a huge issue. And people are now being forced to check what are the possible causes of this and link to climate change. [We see this] a lot in the media and social media everywhere (SA5)*

Participants felt that there had been an increase in media interest in sustainability issues, though it was less salient for most than politics:

*Our media is dominated by issues of politics. And it's not politics on 'I'm going to see what I can do better for the community in this country', it's about political parties and infighting and getting power. (SA9)*

The diversity of students in the HE communities studied offered some opportunities for teaching about sustainability. The student population in the universities studied was mostly black with some students of other ethnicities and with various native languages, reflecting the diversity of the country. However, the conditions for most students were similar with deprivation and disability common characteristics, and the diverse student body was only rarely considered as a teaching point.

#### Faculty use local case studies and resources to supplement textbooks

While some respondents were enthusiastic about textbooks and the structured approach that they offered, others felt that compiling their own resources and real-world examples was more effective:

*For our module, we don't have a textbook. We can't find one that covers all the topics nicely. So we basically populate it with journal articles, government reports, even a few YouTube videos just to change the format for the students (SA10)*

When asked about specific approaches to teaching sustainability issues there was little endorsement of any particular pedagogy. However, references to active learning were common including paired work, discussions, student presentations, role play and watching media:

*I suppose I do use a fairly traditional method in terms of its lectures PowerPoint based videos. The students have to go do research at times. (SA11)*

Case study examples were used widely to illustrate concepts and to make the topic relatable to students' everyday lives. Named examples included corporate responsibility featuring Coca Cola and the Wentworth refinery, but also a range of current social-political issues including load-shedding, coal production, employability rates, political corruption, and poverty:

*We've got a case study on Coca Cola, and you know, their carbon footprint, and what can they be doing better? (SA1)*

*When you're talking about corporate social responsibility, you look at the industrial businesses. And Wentworth refinery, Ok this was big refinery, and people in the area believe that this refinery is the reason that a lot of people suffer with their chests because of the pollution etc. ... Although they are giving back to the community, there's also a lot of corruption – people lining their pockets. (SA4)*

Despite faculty enthusiasm for sustainability, there was a consensus that there was little or nothing in their assessments on it. As sustainable development was rarely part of core content (missing from most textbooks) it was therefore not suitable for assessment – which brings into question the seriousness of embedding in the curriculum:

*Telling students what material is examinable, so if their textbooks do not mention sustainable development and we feel that we need to have a little bit of a lecture on it, it's going to be hard to say this is examinable (SA10)*

#### Faculty negotiate resource issues to enable some interactive teaching about sustainability

Alongside lecturing, the use of interactive approaches, discussions, role plays and real-life issues was supported by many respondents, though practical constraints could make this difficult:

*When we try and get discussions going, it tends to be dominated by just two or three, which are happy to speak, make intelligent contributions and the others just sit there. And if you try and teach them online, it's 10 times worse! (SA10)*

Discussions around sustainability might raise controversial issues which could be embraced as opportunities for learning. However, while some participants were confident in introducing controversial material into discussions, this was seen as potentially sensitive in the South African context (particularly in terms of racism, corruption, and inequality):

*I will make controversial statements to get them thinking. I try not to be biased, so I'll ask questions, but I'm very careful not to be racist or biased in the way that I teach ... I've tried to create an environment where students feel comfortable to discuss things ... It is sometimes quite controversial things or quite prejudiced things that they say, but then we'll discuss it (SA11)*

Some also mentioned guest lectures, project opportunities on campus, or internships as helping embed practical experiences into the curriculum:

*For example, when students are cooking in the kitchen, they're learning how to dispose of leftovers. So we put it in a research problem assignment as well as a practical. (SA7)*

Fieldwork and situative approaches were more common at post-graduate level where sustainable development specialisms and more aligned pedagogies were felt to be more achievable. There were however hints of tightening constraints which made fields trips more challenging:

*we don't do field trips etc., we used to many years ago, but it's sort of just petered out. (SA11)*

A few respondents explicitly linked the teaching style with the nature of sustainable development, though this was unusual:

*My style of teaching would be student centred. Because it gets the students more engaged. Especially when using [group work] ... To achieve sustainable development, you must think beyond yourself (SA5)*

## Discussion

This study offers important insights into the challenges and opportunities experienced by faculty when embedding sustainability within business and economics education in South African universities. Previous literature has largely omitted the voices of faculty, tending to focus instead on institutional initiatives and student attitudes. Consistent with broader international literature (Martínez-Bravo et al., 2024; Winter et al., 2022), the findings indicate that while there is growing rhetorical support for ESD, its practical implementation remains inconsistent and heavily reliant on individual faculty motivation (Cotton et al., 2009). Faculty were often enthusiastic about embedding sustainability and made deliberate efforts to make issues relevant to students, contrary to the decontextualised approaches to ESD which have been criticised by earlier reports in South African universities (Soudien et al., 2008). Several participants emphasised the value of indigenous knowledge systems in contextualising sustainability, particularly when addressing developmental issues and student engagement. These findings underscore the need to foreground African epistemologies in sustainability education, a point also made by Metz (2015) and Nkomo (2011). The movement to Africanise and decolonise the curriculum was evident in the use of local case studies, focus on traditional practices, and examples drawn from everyday life.

In contrast to research in other international contexts (Winter et al., 2022), both the student and faculty characteristics were unusual. Whilst concerns about student understanding of sustainability and its complexity are not new, there was an unusually high focus on the lack of pre-university sustainability education which impacted on both faculty and students and acted as a real limitation on what could be taught. The student profile was different across the three institutions; however, in all cases the schooling system and deprivation were key indicators of how lecturers perceived student capacity and motivation to engage in sustainability content. The schooling system outside of the private sector was perceived as varied but consistently inadequate which resulted in students starting a degree lacking substantive knowledge and experience. This meant that much taken-for-granted knowledge had to be generated as there was little emphasis on sustainability themes within pre-tertiary schooling. Student disengagement with sustainability was also a recurring theme, often linked to broader issues of poverty and inequality. Many students perceived sustainability as irrelevant to their immediate concerns, a phenomenon also noted by Uleanya et al. (2024). This perception reinforces the need for ESD that is grounded in local social justice concerns and framed in ways that prioritise economic empowerment and community resilience. As one participant noted, sustainability must resonate with students' lived experiences, such as food insecurity or localised pollution, to be meaningful and effective. If it does not, whose agenda is it really?

The structural limitations of the South African HE system also emerged as a significant constraint. Mirroring previous findings (Awuzie & Emuze, 2017; Lotz-Sisitka et al., 2020), participants reported limited institutional or governmental guidance, and a near absence of national strategies to embed ESD in curricula. This places an enormous burden on individual faculty, many of whom lack formal training in sustainability (Nyika, 2024; Sales de Aguiar & Paterson, 2018). The dependence on

US- and UK-published textbooks, which frequently omit local sustainability challenges, further undermines efforts to deliver relevant and situated learning (Nkomo, 2011). As one respondent explained, "If the textbook doesn't cover it, we won't teach it", reinforcing the gate-keeping role that curriculum materials play in shaping what is taught. Systemic issues such as high staff-student ratios, underfunding, and infrastructural challenges (e.g. load-shedding) also restrict pedagogical innovation. The Department of Higher Education and Training (2013) reported a sector-wide staff-student ratio of 1:59, a figure that reflects the immense pressure on faculty and explains the reliance on lecture-based delivery. Nkomo (2015) further notes that the sector continues to struggle with the recruitment and retention of skilled faculty, which limits the capacity for long-term curriculum transformation.

A key contribution of this study lies in its illumination of how global sustainability agendas, such as the SDGs, are interpreted and negotiated within local South African HE contexts. Although international initiatives like PRME (Stubbs & Cocklin, 2008) and the Dasgupta Review (2021) call for rethinking economic paradigms, participants in this study often viewed these frameworks as Western-centric and poorly aligned with South Africa's socio-political and economic realities. Echoing critiques by Soudien et al. (2008) and Uleanya and Yassim (2024), our findings highlight a tension between global, often decontextualised, conceptualisations of sustainability and the need for Africanised, locally meaningful approaches. In an effort to understand and envision other possibilities for embedding sustainability in business and economics disciplines in this context, we return to the conceptual framing outlined at the start which emphasised the need for pedagogies that foster critical reflection and transformative learning. Sterling (2004) argues that sustainability "does not simply require an 'add-on' to existing structures and curricula but implies a change of fundamental epistemology in our culture and hence also in our educational thinking and practice." (Sterling, 2004, p. 50). He describes four different social and educational responses to the sustainability challenge (see Table 4).

The pedagogic approaches discussed by faculty in our study (as in most other contexts) largely amount to a 'bolt-on' response, according to Sterling's categorisation. Effective ESD approaches require learners to grapple with complex, contextually situated problems. Within higher education, and particularly in settings such as South Africa, transformative learning is shaped and constrained by institutional cultures, resource limitations, and broader socio-political realities. In our study, there was little or no indication of a challenge to the dominant paradigm in the disciplines, nor did we see systemic changes to the education structures. This is understandable given the constraints which faculty are working within, and yet this is a context which seems to call for a significant challenge to the way that both sustainability and business and economics have been conceptualised. The future for South Africa relies on approaches inclusive of decolonisation and Africanisation, challenging western concepts of development, growth and sustainability and taking account of 'coloniality of power' (Quijano, 2000) in sustainability transitions.

So what might a 'very strong' sustainability transition look like in this context? According to Sterling (2004), this is a transformation, a

**Table 4**  
Comparing staged social and educational responses to sustainability (based on Sterling, 2004).

Sustainability transition	Response	State of sustainability	State of education
Very weak	Denial, rejection or minimum	No change (or token)	No change (or token)
Weak	'Bolt on'	Cosmetic reform	Education <i>about</i> sustainability
Strong	'Build in'	Serious greening	Education <i>for</i> sustainability
Very strong	Rebuild or redesign	Wholly integrative	Sustainable education

"deep conscious reordering of assumptions which leads to paradigm change" (p.58). In Business and Economics disciplines, this would mean entire curriculum redesign based on the need for a paradigm change, and a move away from the focus on growth and consumption. It would also mean an increased focus on education as participatory, real-world problem solving which we see hints of here already. Transformative learning demands learning environments in which students feel supported to critically examine assumptions, engage emotionally, and participate in dialogue that challenges established norms (Moore, 2005). The meaning of sustainability in business and economics in the South African context would be explored and renegotiated with students and the wider community, taking both a broader view of the discipline(s) and of student learning. The opportunity for these disciplines in particular is that they can, and should, challenge the neoliberal world order that will otherwise only "reproduce the same ways of knowing, thinking and relating that created the problems it is trying to solve" (Andreotti, 2009, p. 9) thereby offering the potential both for sustainability and a 'just transition'.

## Conclusions and implications

This study offers a nuanced understanding of the complexities of embedding sustainability in South African business and economics disciplines, where barriers often seemed to overwhelm opportunities. A critical question emerges from our research: Whose agenda is sustainability education serving? Many respondents perceive it as externally imposed, shaped by global frameworks that failed to resonate with local realities. Despite efforts by faculty to use local examples to emphasise the relevance to students' lives, there is limited evidence of this having an impact.

By foregrounding faculty perspectives, this research offers novel insights into the disconnect between global sustainability agendas and local socio-political and economic realities, underscoring the need for contextually relevant approaches to ESD. This was the case even where international sustainability pressures (e.g. climate change mitigation) and local issues (domestic energy shortages) should have been in alignment. A key contribution of this research lies in its exploration of how faculty navigate structural, curricular, and pedagogical challenges while attempting to integrate sustainability into their teaching. This study reveals the difficulties faculty have reconciling competing priorities and managing resource limitations, in the context of an often patchy school education system.

Our research has implications for policy and curriculum development, as it suggests that systemic barriers remain which prevent widespread curricular integration of ESD. Stronger governmental and institutional backing through faculty training, curriculum reform (at all education levels), and the production of locally relevant resources is crucial, as is support to integrate indigenous knowledge and decolonial approaches into ESD both within and beyond South Africa. As the global sustainability agenda continues to evolve, South African universities must be empowered to shape their own path, one that reflects their unique cultural, political, and educational landscapes.

*People with money and education in private schools and tutors are totally not worried about sustainability, because they'll be able to insulate themselves and make more money. And for us, it doesn't matter because it's not a real issue. Which then makes us wonder, whose agenda is it?*

## CRediT authorship contribution statement

**Debby R.E. Cotton:** Writing – review & editing, Writing – original draft, Supervision, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Jennie Winter:** Writing – review & editing, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Jason Stratham Davis:** Writing – review & editing, Formal analysis, Data curation. **Oscar Lindsey-Turner:** Writing – review & editing, Project

administration.

## Declaration of competing interest

The authors declare no conflicts of interest related to this research.

## Acknowledgements

We are grateful to the academic staff at the universities involved who generously shared their time and insights for this study. We also acknowledge the support of Plymouth Marjon University, particularly for providing the time and institutional space that made this research possible. This study received ethical clearance from the Plymouth Marjon University, UK ethics committee and the ethics committee of Durban University of Technology, South Africa.

## References

America, C. (2014). Integrating sustainability into business education teacher training. *South African Journal of Education*, 34(3). <https://doi.org/10.15700/201409161105>

Andreotti, V. (2009). Global Education in the '21st Century': Two different perspectives on the 'post-' of postmodernism. *International Journal of Development Education and Global Learning*, 2(2), 5–22. <https://journals.ucpress.co.uk/ijdeg/article/1d/1950/>

Awuzie, B., & Emuze, F. (2017). Promoting sustainable development implementation in higher education: Universities in South Africa. *International Journal of Sustainability in Higher Education*, 18(7), 1176–1190. <https://doi.org/10.1108/IJSHE-09-2016-0167>

Barth, M., Godemann, J., Rieckmann, M., & Stoltenberg, U. (2007). Developing key competencies for sustainable development in higher education. *International Journal of Sustainability in Higher Education*, 8(4), 416–430. <https://doi.org/10.1108/14676370710823582>

Blumer, H. (1954). *What is wrong with social theory?*, 19 pp. 3–10). American Sociological Review. <https://www.scribd.com/document/412453026/Blumer-1954-sensitizing-concepts-pdf>.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.

Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). Sage Publications.

Cotton, D. R. E., & Alcock, I. (2012). Commitment to environmental sustainability in the UK student population. *Studies in Higher Education*, 38(10), 1457–1471.

Cotton, D. R. E., Winter, J., Jones, P., & Sterling, S. (2010). It's not just bits of paper and light bulbs: Sustainability pedagogies. In D. Selby (Ed.), *Sustainability education* (pp. 39–54). Earthscan/James & James.

Cotton, D., Bailey, I., Warren, M., & Bissell, S. (2009). Revolutions and second-best solutions: Education for sustainable development in higher education. *Studies in Higher Education*, 34(7), 719–733. <https://doi.org/10.1080/03075070802641552>

Craig, C. A., & Karabas, I. (2025). Sustainability science in management education: Cognitive and affective sustainability learning in an MBA course. *The International Journal of Management Education*, 23(2), Article 101153. <https://doi.org/10.1016/j.ijme.2025.101153>

Cranton, P. (2006). *Understanding and promoting transformative learning*, 2nd ed., a guide for educators of adults. San Francisco: Jossey-Bass Publishers.

Dasgupta, P. (2021). *The economics of biodiversity: The dasgupta review*. London: HM Treasury. [https://assets.publishing.service.gov.uk/media/602e92b2e90e07660f807b47/The\\_Economics\\_of\\_Biodiversity\\_The\\_Dasgupta\\_Review\\_Full\\_Report.pdf](https://assets.publishing.service.gov.uk/media/602e92b2e90e07660f807b47/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf)

Delgado-Ceballos, J., Ortiz-De-Mandojana, N., Antolín-López, R., & Montiel, I. (2023). Connecting the Sustainable Development Goals to firm-level sustainability and ESG factors: The need for double materiality. *BRQ Business Research Quarterly*, 26(1), 2–10. <https://doi.org/10.1177/2340944221140919>

Feinstein, N. W., Jacobi, P. R., & Lotz-Sisitka, H. (2013). When does a nation-level analysis make sense? ESD and educational governance in Brazil, South Africa, and the USA. *Environmental Education Research*, 19(2), 218–230. <https://doi.org/10.1080/13504622.2013.767321>

Giddings, B., Hopwood, B., & O'Brien, G. (2002). Environment, economy and society: Fitting them together into sustainable development. *Sustainable Development*, 10(4), 187–234.

Institute of Directors (South Africa). (2009). *King code of governance principles for South Africa 2009*. Available online at: <https://www.ecgi.global/sites/default/files/codes/documents/king3.pdf>.

Kimanzi, M. K. (2020). The role of higher education institutions in fostering innovation and sustainable entrepreneurship: A case of a university in South Africa. *International Journal of Business and Management Studies*, 12(2).

Lotz-Sisitka, H., Rosenberg, E., & Ramsarup, P. (2020). Environment and sustainability education research as policy engagement: (re-) invigorating 'politics as *potentia*' in South Africa. *Environmental Education Research*, 27(4), 525–553. <https://doi.org/10.1080/13504622.2020.1759511>

Lotz-Sisitka, H., Wals, A. E. J., Kronlid, V., & McGarry, D. (2015). Transformative, transgressive social learning: Rethinking higher education pedagogy in times of systemic global dysfunction. *Current Opinion in Environmental Sustainability*, 16, 73–80. <https://www.sciencedirect.com/science/article/abs/pii/S1877343515000822>

Lozano, R., M., Merrill, Y., Sammalisto, K., Ceulemans, K., & Lozano, F. J. (2017). Connecting competences and pedagogical approaches for sustainable development in higher education: A literature review and framework proposal. *Sustainability*, 9 (10), 1889–1904.

Martínez-Bravo, M., Capobianco-Uriarte, M., Terán-Yepez, E., Marín-Carrillo, G. M., & Casado-Belmonte, M. (2024). Integrating sustainability into business and management studies in higher education. *The International Journal of Management Education*, 22, Article 100939.

Marx, B., & van der Watt, A. (2013). Sustainability in accounting education: An analysis of the teaching thereof at accredited South African universities. *South African Journal of Accounting Research*, 27(1), 59–86. <https://doi.org/10.1080/10291954.2013.11435171>

Metz, T., Tabensky, P., & Matthews, S. (2015). Africanising Institutional Culture: What is Possible and Plausible. *Being at home: Race, institutional culture and transformation at south african higher education institutions* (pp. 242–272). Pietermaritzburg, South Africa: University of KwaZulu-Natal Press.

Meyer, A. (2015). Does Education Increase Pro-Environmental Behaviour? Evidence from Europe. *Ecological Economics*, 116, 108–121. Available online at <https://www.sciencedirect.com/science/article/abs/pii/S0921800915001998>.

Mezirow, J. (1997). Transformation Theory out of Context. *Adult Education Quarterly*, 48 (1), 60–62. <https://doi.org/10.1177/074171369704800105>

Moore, J. (2005). Is higher education ready for transformative learning? A question explored in the study of sustainability. *Journal of Transformative Education*, 3(1), 76–91.

Narong, D. K. (2025). Business and management education for sustainability: A state-of-the-art review of literature post-UN Decade of Education for Sustainable Development (2015–2023). *The International Journal of Management Education*, 23 (2), 101115. <https://doi.org/10.1016/j.ijme.2024.101115>

Nkomo, S. M. (2011). A postcolonial and anti-colonial reading of 'African' leadership and management in organization studies: Tensions, contradictions and possibilities. *Organization*, 18, 365–386.

Nkomo, S. M. (2015). Challenges for Management and Business Education in a "Developmental" State: The Case of South Africa. *Academy of Management Learning & Education*, 14(2), 242–258. <https://doi.org/10.5465/amlre.2014.0323>

Nyika, F. (2024). Challenges of incorporating sustainable development goals into south african higher education curricula. *Indonesian Journal of Education and Social Sciences*, 3(2), 192–200. <https://doi.org/10.56916/ijess.v3i2.749>

Olsson, D., Gericke, N., & Boeve-de Pauw, J. (2022). The effectiveness of education for sustainable development revisited—a longitudinal study on secondary students' action competence for sustainability. *Environmental Education Research*, 28(3), 405–429. <https://doi.org/10.1080/13504622.2022.2033170>

Quijano, A. (2000). Coloniality of power and Eurocentrism in Latin America. *International sociology*, 15(2), 215–232.

Sales de Aguiar, T. R., & Paterson, A. S. (2018). Sustainability on campus: knowledge creation through social and environmental reporting. *Studies in Higher Education*, 43, 1882–1894. <https://www.tandfonline.com/doi/full/10.1080/03075079.2017.1289506>

Sathyaranand, A., Moodley Bhulaye, E., Nokulunga Nhleko, M., & Thabiso Sthembiso, M. (2025). Evaluating sustainable entrepreneurship education in South Africa: Insights from a systematic review. *African Journal of Inter/Multidisciplinary Studies*, 7(1), 1–14.

Saudelli, M. G., & Niemczyk, E. (2022). Education for sustainable development: Insights from Canadian and South African universities. *Perspectives in Education*, 40(3), 47–61. <https://doi.org/10.38140/pie.v40i3.5679>

Silverman, D. (2005). *Doing qualitative research* (2nd ed.). London: Sage.

Sipos, Y., Battisti, B., & Grimm, K. (2008). Achieving transformative sustainability learning: Engaging head, Hands and Heart. *International Journal of Sustainability in Higher Education*, 9, 68–86. <https://doi.org/10.1108/14676370810842193>

Soudien, C., Michaels, W., Mthembu-Mahanyele, S., Nkomo, M., Nyanda, G., Nyoka, N., ... Villa-Vicencio, C. (2008). *Report of the ministerial committee on transformation and social cohesion and the elimination of discrimination in public higher education*. South Africa: Department of Education.

Stake, R. E. (1995). *The art of case study research*. London: Sage.

edited by Sterling, S. (2004). Higher Education, Sustainability, and the Role of Systemic Learning. In P. Corcoran, & A. Wals (Eds.), *Higher education and the challenge of sustainability* (pp. 49–70). Dordrecht: Springer. edited by.

Sterling, S. (2012). *The future fit framework*. Advance HE. York, UK. <https://www.advance-he.ac.uk/knowledge-hub/future-fit-framework>.

Stubbs, W., & Cocklin, C. (2008). Teaching sustainability to business students: Shifting mindsets. *International Journal of Sustainability in Higher Education*, 9(3), 206–221. <https://doi.org/10.1108/14676370810885844>

Taylor, E. W., Cranton, P., & Taylor, E. W. (2012). Reflecting back and looking forward. In P. Cranton (Ed.), *Handbook of transformative learning: Theory, research and practice* (pp. 553–574). San Francisco, CA: Jossey-Bass.

Teixeira, K., & le Roux, A. (2016). Education for sustainable development in South Africa: A model case scenario. *Africa Education Review*, 13(3–4), 65–79. <https://doi.org/10.1080/18146627.2016.1224584>

Uleanya, Chinaza, Ilesammi, Kehinde, Yassim, Kat, Omotosho, Ademola, & Kimanzi, Mathew (2024). Sustainability consciousness of selected university students in South Africa. *International Journal of Sustainability in Higher Education*, 25, 505–521. <https://doi.org/10.1108/LISHE-01-2024-0046>

UN Global Compact. (2007). *Principles for responsible management education (PRME)*. New York, US. <https://unglobalcompact.org/what-is-gc/our-work/management-education>.

UN Global Compact. (2011). *LEAD: Advancing corporate sustainability leadership*. <https://unglobalcompact.org/take-action/leadership/gc-lead> (accessed 23/05/24).

United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. New York, US: United Nations General Assembly. <https://sdgs.un.org/2030agenda>.

Vargas- Merin, J. A., Rios-Lama, C. A., Bello-Mamani, D. X., & Panez-Bendezú, M. H. (2025). Sustainable entrepreneurship in HEIs. A systematic review from the perspective of higher education in business. *The International Journal of Management Education*, 23(2), Article 101137. <https://doi.org/10.1016/j.ijme.2025.101137>

Wals, A. E. J., & Benavot, A. (2017). Can We Meet the Sustainability Challenges? The Role of Education and Lifelong Learning. *European Journal of Education*, 52(4), 404–413. <https://doi.org/10.1111/ejed.12250>, open in a new window.

Wang, W. (2015). An Exploration of Patterns in the Practice of Education for Sustainable Development in China: Experience and Reflection. *Open Journal of Social Sciences*, 03 (05), 64–75. <https://doi.org/10.4236/jss.2015.35010>, open in a new window.

Wiek, A., Withycombe, L., & Redman, C. L. (2011). Key competencies in sustainability: A reference framework for academic program development. *Sustain Sci*, 6, 203–218. <https://doi.org/10.1007/s11625-011-0132-6>

Winter, J., & Cotton, D. R. E. (2012). Making the hidden curriculum visible: Sustainability literacy in higher education. *Environmental Education Research*, 18(6), 783–796.

Winter, J., Cotton, D., Grant, V., & Hopkinson, P. (2015). The university as a site for transformation around sustainability. *International Journal of Innovation and Sustainable Development*, 9(3/4), 303–320.

Winter, J., Zhai, J., & Cotton, D. R. E. (2022). Teaching environmental sustainability in China: Opportunities and challenges for business and economics faculty in higher education. *Environmental Education Research*, 28(2), 318–332. <https://doi.org/10.1080/13504622.2021.2012560>

World Commission on Environment and Development (WCED). (1987). *Our common future*. Oxford University Press.