Assessing the state of sustainable finance education and the barriers to its implementation in Zambian universities

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ABSTRACT

Sustainable finance education is widely regarded as a foundation for green entrepreneurship, yet there is little empirical evidence on how it is delivered in African higher education and none, to the authors' knowledge, for Zambian universities. Guided by institutional theory, the study (i) assessed the current state of sustainable finance education in Zambian universities and (ii) identified the structural, pedagogical, and institutional barriers that constrain its implementation. An embedded mixed-methods design with a dominant quantitative strand was adopted. A cross-sectional online questionnaire was completed by 310 undergraduate and postgraduate students enrolled in business, finance, economics, environmental studies, social sciences, and engineering/technology programmes at public and private universities in Lusaka (analytic sample n = 272). Quantitative data were analysed using descriptive statistics and Cronbach's alpha (α), while two semi-structured interviews were analysed using six-phase thematic analysis. Only 37.7% of respondents had taken any sustainable finance-related course. The current state of sustainable finance education was rated only marginally above the scale midpoint (mean [M] = 3.23, standard deviation [SD] = 0.64, α = .74), with co-curricular provision rated lowest. All perceived barriers were rated above the midpoint (M = 3.54, SD = 0.56, α = .67), the strongest being limited access to locally relevant case studies (M = 3.63) and weak university–industry collaboration (M = 3.62), both of which were independently echoed by the interviewees. Sustainable finance content is present but peripheral in the sampled universities, reflecting a "bolted-on" pattern and a decoupling between national policy commitments and classroom practice; the binding constraint is access to relevant local materials and industry linkages rather than the conceptual difficulty of the subject. Universities should audit mandatory modules for sustainable finance content, jointly develop a shared Zambia-specific case repository, and formalise partnerships with green-economy actors, while policymakers should treat these as priority investments in implementing the national curriculum and green growth frameworks.

Keywords: Curriculum Mainstreaming; Environmental, Social and Governance (ESG); Green Entrepreneurship; Higher Education Barriers; Institutional Theory; Sustainable Finance Education; Zambia

I. INTRODUCTION

Green entrepreneurship, the creation of profitable businesses that prioritise environmental sustainability, is increasingly viewed as a pathway to inclusive and ecologically responsible growth in developing economies, and universities are expected to support this transition through their teaching, research, and institutional practice (United Nations Environment Programme [UNEP], 2021). In Zambia, this promise coexists with significant structural challenges. The 2023 Labour Force Survey estimated the youth (19–34 years) unemployment rate at 17.2%, rising to 20.0% in urban areas (Zambia Statistics Agency [ZamStats] & Ministry of Labour and Social Security [MLSS], 2024), reflecting a long-documented mismatch between young people's entrepreneurial potential and the availability of formal employment (Chigunta & Mwanza, 2016). At the same time, forests and other renewable natural resources constitute a substantial share of the country's national wealth, which is threatened by unsustainable exploitation (World Bank, 2020; World Bank Group, 2019). Universities are central to addressing both challenges because they prepare the next generation of entrepreneurs, financiers, and policymakers who will create and finance environmentally sustainable enterprises.

Realising this potential depends on a requirement that has not yet been examined empirically in Zambia: students must receive sustainable finance education that is comprehensive, consistent, and practically applicable. Zambia's policy framework has moved decisively in this direction. The 2023 Zambia Education Curriculum Framework calls for curriculum reform centred on "Education for Sustainability" and for the integration of entrepreneurship, sustainability, and science, technology, engineering, and mathematics (STEM) from early childhood to tertiary

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education (Ministry of Education, Republic of Zambia, 2023). The Eighth National Development Plan (8NDP) 2022–2026 identifies poor educational outcomes as a constraint on national development (Government of the Republic of Zambia, 2022), while the National Green Growth Strategy (NGGS) 2024–2030 sets an implementation target of approximately 10 billion United States dollars (USD) across four pillars of green growth (Ministry of Green Economy and Environment, Republic of Zambia, 2024). The financial system is also changing: the Bank of Zambia gazetted Green Loans Guidelines in 2023 (Biodiversity Finance Initiative [BIOFIN], 2023), and Zambia's green bond market has begun to mobilise capital for renewable energy projects (United Nations Development Programme [UNDP], 2024). Whether university curricula have evolved in line with these developments, however, has not been investigated using primary data.

This gap is compounded by the fact that, although entrepreneurship education has gained some institutional support in Zambian universities (Matoka & Mwange, 2024; Mwange et al., 2025), the specific financial competencies needed to create and grow environmentally sustainable enterprises have received far less scholarly and curricular attention. Accordingly, this study assesses the current state of sustainable finance education in Zambian universities and examines the structural, pedagogical, and institutional barriers that constrain its effective implementation.

1.1 Statement of the Problem

Sustainable finance, the integration of environmental, social, and governance (ESG) considerations into financing and investment decisions (Raman et al., 2025), is increasingly recognised as an enabler of green entrepreneurship because it channels capital and strategic frameworks towards ventures that address environmental challenges while supporting inclusive development. In Zambia, where youth unemployment remains high and natural capital is under pressure (World Bank Group, 2019; ZamStats & MLSS, 2024), green entrepreneurship could make a substantial contribution to sustainable development. Realising this contribution, however, depends on graduates who possess the requisite sustainable finance knowledge and skills.

There are indications that the integration of sustainable finance into Zambian higher education curricula remains at an early stage. University students, the group from which future entrepreneurial leaders will emerge, often lack the knowledge and practical skills needed to start and grow green enterprises. This lack of preparedness is compounded by interrelated obstacles: limited exposure to sustainability concepts, a shortage of locally relevant case studies and hands-on training, and, in many institutions, weak support structures for sustainability-oriented entrepreneurship. Comparable constraints, notably insufficient funding, inadequate infrastructure, and limited human resources, have been reported among African universities pursuing climate-related reforms (Leal Filho et al., 2026).

This educational gap persists despite the national policy commitments outlined above (Government of the Republic of Zambia, 2022; Ministry of Education, Republic of Zambia, 2023; Ministry of Green Economy and Environment, Republic of Zambia, 2024). If it is not addressed, it risks sustaining a divide between knowledge and practice that limits the growth of green start-ups, compounds youth unemployment, and slows Zambia's environmental and economic transformation. Yet no study identified in the existing literature has examined the current status of sustainable finance, green finance, or ESG content in the finance and business programmes of Zambian universities, or the barriers that constrain such provision. This is the problem that the present study addresses.

1.2 Research Objectives

i. To assess the current state of sustainable finance education in Zambian universities.
ii. To explore and categorise the structural, pedagogical, and institutional challenges that hinder the effective implementation and delivery of sustainable finance education in Zambian universities.

II. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Sustainable Finance and Sustainable Finance Education

Sustainable finance refers to the integration of ESG factors into financing and investment decisions so that capital allocation supports the Sustainable Development Goals (SDGs); green finance is the environmentally focused subset of this field and includes instruments such as green bonds and green loans (Raman et al., 2025). Sustainable finance education, as used in this study, denotes the formal and co-curricular learning through which students acquire the knowledge and skills to apply these principles, for example, by appraising the ESG risks of an investment, structuring finance for a green venture, or using green financial instruments. The concept is no longer abstract in Zambia: green loan guidelines and a green bond market now exist (Biodiversity Finance Initiative [BIOFIN], 2023; UNDP, 2024), which creates demand for graduates who can operate within them.

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Two variables follow from this conceptualisation and correspond to the study's objectives. The first, the current state of sustainable finance education, is defined as the extent to which sustainable finance content is integrated into curricula, the adequacy of coverage of green, ESG, and climate finance, the contextual relevance of teaching materials, institutional encouragement of interdisciplinary learning, and the availability of co-curricular activities (items B1–B5 in Section 3.5). The second, perceived barriers, is defined as the institutional, financial, relational, and resource-related conditions that constrain delivery, namely institutional support, the priority accorded to sustainable finance, funding, university–industry collaboration, and access to local case material (items C1–C4 and C6).

2.1.2 Modes of Curricular Integration

The literature offers a useful yardstick for judging how deeply sustainability is embedded in business curricula. Rusinko (2010) proposes a matrix that distinguishes between adding sustainability to existing courses (piggybacking), integrating it into core courses (mainstreaming), offering specialised standalone courses, and creating new cross-disciplinary programmes. Painter-Morland et al. (2016), drawing on a survey of European business schools, found that most schools adopt one or more of these approaches, but argued that a fifth dimension, systemic institutional integration, is required. This dimension depends on systemic leadership, connectedness to business and society, and institutional capacity building. The framework matters for the present study because it shows that the mere presence of sustainable finance content, for example, an elective module, is not evidence of integration. Content that is confined to electives or appended to existing courses corresponds to the weakest forms of integration, which the literature describes as "bolted-on".

2.2 Theoretical Review

2.2.1 Institutional Theory

This study is anchored in institutional theory, which holds that organisations operating within a shared organisational field, such as universities within a national higher education system, face coercive, normative, and mimetic pressures that shape whether, and how deeply, they adopt new practices (DiMaggio & Powell, 1983). Coercive pressures arise from authorities on which an organisation depends; in Zambia these include the Ministry of Education through the 2023 Curriculum Framework, the 8NDP, and the NGGS (Government of the Republic of Zambia, 2022; Ministry of Education, Republic of Zambia, 2023; Ministry of Green Economy and Environment, Republic of Zambia, 2024). Normative pressures stem from professionalisation and from standards promoted by professional and accrediting bodies; outlets associated with the Association to Advance Collegiate Schools of Business (AACSB), for instance, increasingly promote embedding sustainability and ESG across the core curriculum rather than confining it to standalone courses (Davidson & Schlierer, 2025; Financial Times, 2021). Mimetic pressures arise when organisations imitate peers under conditions of uncertainty, for example, when universities benchmark their curricula against regional or international institutions responding to the same global sustainability agenda.

A central proposition of institutional theory, developed by Meyer and Rowan (1977), is that organisations facing such pressures often adopt the formal, symbolic features of reform, such as mission statements, policy endorsements, and isolated elective modules, more quickly than they change core technical practice, producing decoupling between official structure and day-to-day activity. Rasche and Gilbert (2015) extend this argument to business schools, proposing that decoupling of responsible management education is likely when schools face resource stringency, internal resistance to change, competing institutional pressures, and ambiguous institutional demands. Empirical evidence supports the proposition but also complicates it: in a fuzzy-set analysis of business schools, Snelson-Powell et al. (2016) found that commitment and action were not always decoupled, and that schools that were smaller and more prestigious but had fewer financial resources tended to couple their sustainability commitments tightly to their actions. Resources therefore do not determine outcomes on their own, and how they interact with institutional characteristics is an empirical question in each context.

Institutional theory is applied here to both objectives. Objective 1 (the current state of sustainable finance education) is treated as an empirical indicator of the degree of coupling between Zambia's national policy commitments and classroom practice. Objective 2 (barriers) is interpreted through the conditions that Rasche and Gilbert (2015) associate with decoupling: inadequate funding (item C3) reflects resource stringency, the treatment of sustainable finance as optional (C2) reflects competing institutional priorities, and limited institutional support (C1) reflects weak internal commitment, while weak industry links and scarce local cases (C4, C6) correspond to the connectedness and capacity conditions that Painter-Morland et al. (2016) identify as prerequisites for systemic integration. The theory has a known limitation: it explains conformity and symbolic adoption better than it explains the agency of individual lecturers and students. This is one reason for complementing the survey with qualitative accounts of how students actually encountered sustainable finance.

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2.3 Empirical Review

2.3.1 The Current State of Sustainable Finance Education

International evidence consistently indicates that sustainability and ESG content in business and finance education tends to be optional, peripheral, or appended to existing courses rather than embedded in the core curriculum. Practitioner accounts from business schools report that sustainability is often confined to standalone courses, leaving students with a patchy ESG education (Davidson & Schlierer, 2025). A recent review of sustainability in higher education institutions similarly finds that institutional commitments are not always matched by depth of implementation (Ankareddy et al., 2025). The pattern is most pronounced in finance: in a systematic review of accounting and finance curricula, Mburayi and Wall (2018) concluded that these disciplines lag behind other management fields in embedding sustainability and that institutional commitment is often decisive for effective integration. Much of this literature, however, comes from well-resourced systems in Europe and North America and consists of reviews or practitioner commentary rather than primary data on student experience, which limits its direct transferability to Sub-Saharan Africa.

African evidence points in the same direction but remains thin. A content analysis of the accounting curricula of 76 Nigerian universities found that only 16 of 62 sustainability-related keywords appeared, and only in the curricula of 25 universities, indicating a low level of integration (Nnam et al., 2025). A commentary on African universities' responses to climate change reports that many institutions are incorporating climate themes across disciplines (Leal Filho et al., 2026). The contrast is instructive: climate content appears to be spreading across African curricula, while finance-specific sustainability content, where evidence exists, appears to lag. Neither study, however, examines sustainable finance in business and finance programmes from the students' perspective.

Evidence specific to Zambia is limited and comes from adjacent fields. A review of hospitality and tourism training curricula found no dedicated module on environmental education, sustainability education, or green practices (Moonga & Chileshe, 2020). Recent reforms have focused largely on basic education. With support from the Facility for Action for Climate Empowerment to achieve Nationally Determined Contributions (FACE-NDC), a project led by the Food and Agriculture Organization of the United Nations (FAO), Zambia launched a new national curriculum framework that integrates climate change education at all levels (Food and Agriculture Organization of the United Nations [FAO], 2024). At the tertiary level, the project's work has centred on reviewing renewable energy curricula at the University of Zambia and Copperbelt University (International Climate Initiative [IKI], 2024). Taken together, this evidence reveals a recurring pattern of limited curricular integration across disciplines, but none addresses sustainable finance in university finance and business programmes.

2.3.2 Barriers to Sustainable Finance Education

The literature identifies three broad categories of barrier: structural barriers (funding, policy, and infrastructure), pedagogical barriers (teaching materials, case studies, and staff expertise), and institutional barriers (the priority accorded to sustainability, leadership commitment, and external linkages). In well-resourced systems, the emphasis falls on institutional and organisational factors. Mburayi and Wall (2018) identify institutional commitment as a strong imperative for integration in accounting and finance; Rasche and Gilbert (2015) highlight resource stringency, resistance, and competing pressures; and Painter-Morland et al. (2016) argue that integration cannot succeed without connectedness to business and institutional capacity building. In green finance markets more broadly, Raman et al. (2025) report that high transaction costs, insufficient institutional frameworks, and capacity constraints in developing countries hinder the adoption of green finance instruments, conditions that also limit the stock of local practice from which teaching cases can be drawn.

African studies foreground more basic resource constraints. Leal Filho et al. (2026) identify insufficient funding, inadequate infrastructure, political instability, limited human resources, and weak policy support as barriers to climate action in African universities. In Zambia, Matoka and Mwange (2024) report that the provision of entrepreneurship education is constrained by a lack of supporting policies, inadequate funding, staff shortages, inadequate infrastructure, and a weak entrepreneurial culture. The value of overcoming these constraints is suggested by evidence that entrepreneurship education strengthens students' entrepreneurial intentions in Zambia, both directly (Mwaanga et al., 2022) and through entrepreneurial self-efficacy and attitudes (Mwange et al., 2025). This Zambian literature, however, treats entrepreneurship education generically; it neither identifies sustainable finance or green-venture content as a distinct curricular focus nor examines the barriers specific to embedding such content in finance and business programmes.

Read critically, the two bodies of literature suggest competing explanations. If the constraints that dominate in well-resourced systems also apply in Zambia, sustainable finance education should be limited mainly by institutional priority and faculty commitment. If the resource constraints documented in African studies dominate, it should be limited mainly by access to materials, funding, and external linkages. Which explanation better fits Zambian finance and business programmes has not been tested, and the answer matters because each implies a different sequencing of reform.

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2.4 Research Gap

Three gaps emerge from the review. First, there is a contextual gap: although Zambia has made progress in mainstreaming sustainability at the policy level and in building a green finance architecture (BIOFIN, 2023; Ministry of Education, Republic of Zambia, 2023; UNDP, 2024), no study has examined whether these developments have translated into sustainable finance content in the finance and business programmes of Zambian universities. Second, there is an empirical and methodological gap: existing Zambian and African evidence relies largely on curriculum document reviews and commentaries (Leal Filho et al., 2026; Moonga & Chileshe, 2020; Nnam et al., 2025) rather than primary data from the students who are the intended beneficiaries of reform. Third, there is a theoretical gap: the decoupling proposition (Meyer & Rowan, 1977; Rasche & Gilbert, 2015) has been examined mainly in European business schools (Snelson-Powell et al., 2016), and it is not known whether, or for what reasons, Zambian universities decouple policy commitment from practice in sustainable finance. This study addresses these gaps using survey and interview data collected from students in Lusaka.

III. METHODOLOGY

3.1 Research Design

The study adopted a pragmatist research philosophy, which prioritises the research problem and the practical value of findings over strict adherence to a single epistemological position (Mugenda & Mugenda, 2003; Saunders et al., 2019). Pragmatism is well suited to mixed-methods research because it allows quantitative data and qualitative insight to be treated as valid, complementary forms of evidence when investigating a complex social phenomenon. Methodologically, the study employed an embedded mixed-methods design with a dominant quantitative strand: a largely deductive quantitative component, in which descriptive constructs derived from the literature on sustainable finance education and curricular barriers were evaluated against survey data, was paired with an inductive qualitative component in which themes were allowed to emerge from participant interviews through Braun and Clarke's (2006) six-phase thematic analysis. This abductive movement between theory and data is consistent with the pragmatist philosophy and with the study's embedded design, in which two semi-structured interviews supplemented a cross-sectional, self-administered online questionnaire (N = 310) to provide contextual and illustrative depth (Creswell & Plano Clark, 2018). The design is cross-sectional: it captures students' perceptions and institutional conditions at a single point in time, which is appropriate to the study's descriptive and exploratory aims, although the patterns identified should be read as a snapshot rather than as evidence of change over time.

3.2 Study Area

The study was conducted in Lusaka, Zambia's capital and the location of the country's largest concentration of public and private universities offering business, finance, economics, environmental studies, social sciences, and engineering/technology programmes. Lusaka Province was selected because it hosts the widest institutional diversity in the country, allowing the sample to capture variation across both institution type and academic discipline, and because it is an urban centre, where youth unemployment, a key contextual driver of this research, is highest, at 20.0% (ZamStats & MLSS, 2024).

3.3 Target Population

The target population comprised undergraduate and postgraduate students enrolled in business, finance, economics, environmental studies, social sciences, and engineering or technology programmes at public and private universities in Lusaka. This population was selected because these are the disciplinary areas most directly responsible for producing Zambia’s future entrepreneurs, financiers, and policymakers, and therefore the graduates most immediately affected by any gap in sustainable finance education.

3.4 Sampling and Sample Size

Because a complete and systematic sampling frame was not available, the questionnaire was distributed through institutional and departmental networks. This produced a substantial convenience sample with purposive elements aimed at achieving diverse representation across institution type, field of study, and academic level. A total of 310 valid responses were collected; after excluding cases with incomplete composite-construct data, an analytic sample of 272 complete responses (87.7% of the original responses) was retained, a retention rate consistent with recommended thresholds for handling missing data in survey research (Hair et al., 2009). The sample was fairly balanced by gender (47.2% male, 50.2% female), skewed towards undergraduate students (75.6%), predominantly drawn from business, finance, or economics disciplines (56.0%), and reasonably represented across public (57.7%) and private (42.3%) institutions (see Table 1). Two semi-structured interviews were conducted with participants chosen for their contrasting perspectives: one participant was engaged in an active, self-taught green venture at the feasibility stage, while the other

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had minimal exposure and no venture activity. A larger qualitative sample of 20–25 participants was initially planned to reach thematic saturation; however, only two interviews were completed. The qualitative findings are therefore presented as illustrative cases rather than a saturated account, a limitation discussed further in Section 5.1.

3.5 Data Collection Instruments and Procedures

The quantitative instrument comprised demographic questions followed by five-point Likert-type items, with responses ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Section B contained five items assessing the current state of sustainable finance education (B1–B5), while Section C comprised five items assessing perceived barriers (C1–C4 and C6); in the tables that follow, sustainable finance is abbreviated as SF. The semi-structured interview guide comprised seven main questions, supplemented by follow-up probes exploring participants' awareness and understanding of sustainable finance concepts and the structural or curricular challenges they faced, alongside other topics reported in an accompanying paper addressing the study's remaining objectives. The internal consistency of the two quantitative constructs was assessed using Cronbach's alpha (α) and found to be acceptable: Current State of Sustainable Finance Education (α = .74, five items) and Perceived Barriers (α = .67, five items), the former exceeding and the latter closely approaching the conventional threshold of .70 (Hair et al., 2009).

3.6 Data Analysis

Quantitative data were cleaned and analysed in Python to generate descriptive statistics, namely frequencies, percentages, means (M), and standard deviations (SD), together with Cronbach's alpha coefficients for each construct. Qualitative data were analysed manually following Braun and Clarke's (2006) six-phase thematic analysis process: familiarisation, initial coding, searching for themes, reviewing themes, defining and naming themes, and reporting. The two strands were integrated through a joint display connecting quantitative outcomes to their corresponding qualitative themes (Creswell & Plano Clark, 2018). To ensure qualitative trustworthiness given the small sample of two participants, credibility was established through verbatim transcription and direct quotation, dependability through the consistent application of the six-phase process, and confirmability through a documented and traceable coding system. Transferability is nonetheless limited by sample size, and the qualitative patterns identified should be read as representative of two information-rich cases rather than of the broader Zambian student population.

3.7 Ethical Considerations

The research complied with the ethical standards of the University of Zambia's Humanities and Social Sciences Research Ethics Committee (HSSREC). Participation in the questionnaire was voluntary and anonymous, with no identifying information collected. Informed consent was obtained from all interview participants, who were informed of their right to request a summary of the findings; verbatim statements are attributed only to anonymised identifiers, "Participant 1" and "Participant 2."

IV. FINDINGS & DISCUSSIONS

4.1 Sample Profile

Table 1

Demographic Characteristics of Respondents (N = 310)

Characteristic	Category	n	%
Gender	Male	146	47.3
	Female	155	50.2
	Prefer not to say	8	2.6
	No response	1	–
Age group	Below 20	56	18.3
	20-24	117	38.2
	25-29	59	19.3
	30-34	37	12.1
	35 and above	37	12.1
	No response	4	–
Level of study	Undergraduate	232	75.6
	Postgraduate	75	24.4
	No response	3	–
Field of study	Business/Finance/Economics	173	56.0
	Engineering/Technology	57	18.4
	Environmental Studies	35	11.3

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	Social Sciences	26	8.4
	Other	18	5.8
	No response	1	–
University type	Public	177	57.7
	Private	130	42.3
	No response	3	–
Prior SF-related course taken	Yes	116	37.7
	No	192	62.3
	No response	2	–

Note. n = number of respondents. Percentages are valid percentages, computed on the respondents who answered each item; "No response" rows show item-level missing data so that each characteristic sums to N = 310. Percentages may not sum to exactly 100 because of rounding.

Only 37.7% of respondents reported having taken any course or module related to sustainable finance, green finance, ESG, or environmental economics — an initial, directly observed indicator of the curricular gap under investigation.

4.2 Current State of Sustainable Finance Education

Table 2

Descriptive Statistics: Current State of Sustainable Finance Education

Item	n	M	SD
B1. SF concepts are clearly integrated into the curriculum	302	3.14	0.88
B2. Courses adequately cover green finance/ESG/climate finance	305	3.12	0.89
B3. Teaching materials are relevant to Zambia's context	303	3.55	0.96
B4. University encourages interdisciplinary sustainability learning	300	3.33	0.93
B5. Sufficient seminars/workshops/guest lectures on SF	301	2.99	0.91
Construct composite (α = .74)	272	3.23	0.64

Mean scores grouped near the middle of the scale (3.0), with the lowest average noted for co-curricular support (B5, M = 2.99) and the highest for the perceived applicability of teaching resources to Zambia's situation (B3, M = 3.55). Along with the 37.7% rate of prior exposure (Section 4.1), this suggests that education in sustainable finance exists in the institutions surveyed but is not systematically incorporated or regularly supported through co-curricular programmes.

This result aligns with international evidence that sustainability and ESG content in business and finance programmes is often confined to standalone or optional courses rather than embedded in the core curriculum (Ankareddy et al., 2025; Davidson & Schlierer, 2025; Mburayi & Wall, 2018), and with African evidence of low curricular integration (Nnam et al., 2025). In terms of Rusinko's (2010) matrix, the pattern reported here, in which sustainable finance is present but rated only moderately as integrated (B1, M = 3.14) and adequately covered (B2, M = 3.12), is characteristic of piggybacking or elective provision rather than mainstreaming. Read through the lens of institutional theory (Section 2.2), a mean score only slightly above the scale midpoint is consistent with decoupling: universities have absorbed the language of national policy commitments (Ministry of Education, Republic of Zambia, 2023) without yet embedding sustainable finance as a substantive, examinable component of mandatory coursework. The alignment between the quantitative ratings and the qualitative narratives (Theme 1, Section 4.4) constitutes mixed-methods triangulation, which strengthens the credibility of the findings beyond what either method could establish alone. Direct comparison with other Zambian studies is not possible because none has examined sustainable finance in university programmes. The nearest reference point is a review of hospitality and tourism curricula, which found no module dedicated to environmental education, sustainability education, or green practices (Moonga & Chileshe, 2020). This observation mirrors the present results in a different field, suggesting that the shortfall identified here is not unique to finance and business but may reflect a broader, cross-disciplinary pattern in Zambian higher and vocational education. Although this study alone cannot confirm that broader claim, it provides the first quantitative evidence from business and finance programmes specifically.

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4.3 Barriers to Sustainable Finance Education

Table 3

Descriptive Statistics: Perceived Barriers to Sustainable Finance Education

Item	n	M	SD
C1. Limited institutional support for integrating SF	299	3.36	0.83
C2. SF treated as optional rather than core academic priority	301	3.45	0.88
C3. Inadequate funding limits SF programme development	302	3.58	0.87
C4. Insufficient university-industry collaboration on SF	302	3.62	0.91
C6. Limited access to relevant local case studies/empirical data	301	3.63	0.91
Construct composite (α = .67)	272	3.54	0.56

All five identified barrier items received scores that exceeded the midpoint of the scale, with the highest average scores seen in the area of restricted access to locally pertinent case studies and empirical data (C6, M = 3.63) and a lack of collaboration between universities and industries (C4, M = 3.62). This specific pattern at the item level was directly supported by the qualitative data (Section 4.4), in which each interview participant independently noted the lack of locally relevant case material and connections with industry.

This pattern is consistent with barriers reported in the international and African literature, including limited institutional commitment and support (Mburayi & Wall, 2018; Painter-Morland et al., 2016), resource stringency (Rasche & Gilbert, 2015), and insufficient funding, infrastructure, and human resources (Leal Filho et al., 2026; Matoka & Mwange, 2024). Two contrasts with the broader literature merit attention. First, whereas studies from well-resourced systems tend to locate the integration challenge in institutional priority, faculty commitment, and competing pressures (Mburayi & Wall, 2018; Rasche & Gilbert, 2015), the barriers most salient to respondents in this study were more fundamental: the absence of locally relevant material and disconnection from industry. Painter-Morland et al. (2016) identify connectedness to business as a precondition for systemic integration, and the high score for C4 suggests that this precondition is largely unmet in the sampled universities. The scarcity of local cases may also reflect the youth of Zambia's green finance market, whose regulatory instruments, such as the Green Loans Guidelines, date only from 2023 (BIOFIN, 2023; UNDP, 2024), leaving little time for practice-based teaching material to accumulate. In institutional-theory terms, this points to resource-dependent constraints on substantive adoption rather than to a lack of legitimacy at the level of institutional discourse; the barrier lies less in whether universities recognise sustainable finance as legitimate and more in whether they have the materials and linkages to operationalise it. This indicates that, at the sampled undergraduate and postgraduate levels, the primary constraint is access to relevant curricular resources rather than the difficulty of the subject or of teaching methods, which has direct implications for how reforms should be sequenced. Green-economy enterprise programmes now operating in Zambia, such as the European Union (EU)-funded GREEN Tech4CE project implemented by a consortium led by Self Help Africa (European External Action Service [EEAS], 2025), illustrate the type of external partner through which this connectedness gap could be closed. Second, Zambian policy documents, namely the 2023 Curriculum Framework and the 8NDP, already recognise systemic educational constraints at the national level (Government of the Republic of Zambia, 2022; Ministry of Education, Republic of Zambia, 2023). The findings of this study should therefore be read as empirical validation, from the students' own vantage point, of challenges the Zambian government has already acknowledged in principle, reinforcing rather than merely supplementing the existing policy case for curriculum reform.

4.4 Qualitative Corroboration

Two themes from the study's six-theme thematic framework bear directly on Objectives 1 and 2.

Theme 1: Informal and incidental learning pathways. Both participants located their sustainable finance knowledge entirely outside the formal curriculum. Participant 1 (P1) explained: "I haven't been exposed to environmental sustainability practices in a formal setting. However, due to my curiosity about how I can make money whilst protecting the environment, I have had... an opportunity to learn about sustainable financing in an informal way." Participant 2 (P2) reported: "I can't recall any lecture or course that we did on sustainable finance... it was about the period where there was COVID-19. During that time, there were some implementations that were brought about that helped in terms of sustainable development." This directly corroborates the quantitative finding that only 37.7% of respondents reported formal prior exposure.

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Theme 2: Curricular and institutional marginalisation. P1 attributed the absence of sustainable finance content to institutional limitations: "I can attribute this lack of incorporation of sustainable courses due to the lack of the institution and its technology." P2 confirmed that sustainable finance offerings were "just electives" and that "there is no balance between implementation and theory... they don't use local examples." These accounts corroborate the highest-scoring barrier items (C6, access to local case studies, M = 3.63; C4, university–industry collaboration, M = 3.62) and, in Rusinko's (2010) terms, describe elective rather than mainstreamed provision. Taken together, both themes illustrate institutional decoupling in practice: formal commitments exist at the policy and mission level, but day-to-day teaching has not caught up, a gap that participants attributed to resourcing rather than to a lack of institutional intent.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study offers the first primary empirical account of the current state of, and barriers to, sustainable finance education in the finance, business, and related departments of Zambian universities. The findings show that, although sustainable finance education exists, it is inadequately integrated into the curriculum, reflecting the internationally documented "bolted-on" pattern and consistent with the decoupling between national policy commitment and classroom practice predicted by institutional theory (Section 2.2). The primary obstacles to effective delivery are structural, namely access to relevant local materials and industry connections, rather than conceptual difficulty with the subject matter. These conclusions should be read alongside several limitations. The quantitative sample, though substantial (310 valid responses; 272 analysed), was drawn through convenience sampling from institutions in Lusaka rather than through probability sampling, which may limit generalisability to higher education institutions outside Lusaka Province. The qualitative strand relied on two detailed interviews rather than the 20–25 originally planned for thematic saturation, so its findings are best read as illustrative rather than representative. Both strands relied on self-reported data, which may be subject to social desirability bias, and the reliability of the Perceived Barriers construct ($\alpha = .67$) fell marginally short of the conventional .70 threshold, indicating some measurement imprecision. Finally, the cross-sectional design captures perceptions at a single point in time and cannot establish how curricular integration has changed, or may change, over time.

5.2 Recommendations

For universities, particularly those with faculties of business, finance, economics, and environmental studies, the immediate priority is to audit how much sustainable finance content is actually embedded in mandatory coursework, rather than assuming its presence; the assessment items used in this study offer a low-cost starting point for such an audit. The ongoing implementation of the 2023 Zambia Education Curriculum Framework provides a ready-made structure into which this content can be integrated. Because the barriers identified relate primarily to the availability of locally relevant case studies and industry connections rather than to the complexity of the subject matter, the most direct and feasible action is to build a shared, Zambia-specific repository of sustainable finance and green entrepreneurship case studies, developed jointly by public and private universities to spread the resourcing burden. Universities should also pursue structured partnerships that connect students with financial institutions, regulators, and green-economy enterprise programmes operating in Zambia, such as the GREEN Tech4CE project discussed in Section 4.3, through guest lectures, internships, and live case projects.

At the policy level, these findings are directly relevant to the implementation of the National Green Growth Strategy 2024–2030, which depends on a workforce capable of engaging in green enterprise. The Ministry of Education, through the mainstreaming of the Zambia Education Curriculum Framework, and the Ministry of Green Economy and Environment, through the rollout of the National Green Growth Strategy, would both benefit from prioritising the development of locally relevant case studies and industry relationships as concrete curricular investments, guided by this study's evidence on where the binding constraints lie. Future research should revisit the qualitative strand with a larger purposive sample carried through to thematic saturation, extend the survey to institutions outside Lusaka Province, include lecturers and curriculum documents to triangulate student perceptions, and examine whether Zambia's basic-education climate curriculum reforms can be extended specifically into tertiary finance and business curricula.

Declaration of Interest

The authors declare that they do not have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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