
Embedding ESG, sustainability and ethics in accounting assessment: Bridging global standards and educational practice

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ABSTRACT

The growing prominence of environmental, social and governance (ESG) reporting, sustainability, and ethical accountability is reshaping expectations of accounting and management graduates. While these competencies are increasingly embedded within global professional standards and competency frameworks, their translation into educational assessment remains underexplored. This study examines how ESG, sustainability, and ethics are embedded in documented assessment across global standards, professional competency frameworks, and Australian university accounting education.

Using qualitative comparative document analysis, the study analyses the International Federation of Accountants' International Education Standards, the competency frameworks of CPA Australia and Chartered Accountants Australia and New Zealand, and assessment documentation from 104 undergraduate accounting units across 26 Australian universities.

The findings reveal partial and uneven alignment. Although sustainability and ethics are explicitly articulated within global and professional frameworks, they are frequently embedded implicitly within technically oriented assessment tasks rather than explicitly assessed as judgement-focused competencies. To explain this pattern, the study introduces the concept of differential assessability, which explains why some professional competencies are more readily translated into assessment than others despite comparable prominence within professional standards. By reframing ESG integration as an assessment design challenge, the study extends assessment theory and offers practical implications for responsible management and accounting education.

1. Introduction

The rapid expansion of environmental, social and governance (ESG) reporting requirements, together with heightened societal expectations of corporate accountability, is fundamentally reshaping the competencies expected of accounting and management graduates. Recent developments in international sustainability reporting, including the release of IFRS S1 *General Requirements for Disclosure of Sustainability-related Financial Information* and IFRS S2 *Climate-related Disclosures*, signal a decisive shift towards the integration of financial, non-financial, and ethical considerations in organisational decision-making (Alshhadat, 2025; ISSB, 2023a, 2023b). These developments align with broader global agendas, such as the United Nations Sustainable Development Goals, which

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increasingly position business professionals as key actors in advancing sustainable and responsible economic activity (Sharma & McLean, 2025; United Nations, 2015). For management education, these shifts raise critical questions not only about curriculum content, but also about how professional capabilities are developed, evaluated, and legitimised through educational practice.

In response, universities and professional bodies have progressively embedded ESG, sustainability, and ethical considerations within unit learning outcomes, graduate attributes, and competency frameworks for accounting education. Research in management education suggests that such integration reflects growing recognition that technical knowledge alone is insufficient to prepare graduates for complex, value-laden professional contexts (Jain et al., 2025; Khosa et al., 2025; Setó-Pamies & Papoikonomou, 2016). However, prior studies caution that while sustainability and ethics are increasingly embedded within curriculum documentation and competency frameworks, these capabilities do not translate into meaningful learning unless they are explicitly operationalised through assessment, which in accounting education remains predominantly technically oriented (Boud & Falchikov, 2007; Mesny et al., 2026).

Assessment occupies a particularly influential role within management education. Beyond measuring learning outcomes, it shapes students' learning strategies and signals the forms of knowledge, judgement, and capability that constitute legitimate professional competence (Biggs & Tang, 2011; Mesny et al., 2026). Within professional degrees such as accounting, assessment therefore mediates the transition from academic learning to professional practice by reinforcing the competencies students are expected to demonstrate.

Global standard setters have increasingly recognised the centrality of assessment in the development of professional competence. The International Federation of Accountants (IFAC), through revisions to the International Education Standards (IES), has explicitly strengthened requirements relating to professional values, ethics, sustainability, and professional skills across initial professional development (IFAC, 2019; 2023). In particular, IES 2 (Technical Competence), IES 3 (Professional Skills), and IES 4 (Professional Values, Ethics and Attitudes), emphasise the need for integrated and authentic assessment approaches capable of evaluating not only knowledge acquisition but also professional judgement and responsibility in complex, real-world contexts. These expectations reflect a broader shift in management education towards competency-based and authentic assessment models that support holistic capability development (Gulikers et al., 2004; Merriam & Bierema, 2013; Schrage et al., 2025).

Despite these evolving global expectations, evidence suggests that significant challenges remain in translating sustainability and ethical competencies into educational practice, not because such competencies are absent from standards, but because their interpretation and operationalisation through assessment is left largely to professional bodies and institutions. Professional accounting bodies such as Certified Practising Accountant Australia (CPA Australia) and Chartered Accountants Australia and New Zealand (CA ANZ) have incorporated ethics and, more recently, sustainability within their competency frameworks. Similarly, universities increasingly reference ESG-related capabilities in graduate attribute statements. Empirical studies in accounting and business education consistently show that assessment practices remain dominated by technically oriented, examination-driven formats, reflecting longstanding traditions of measurability, standardisation, and accreditation compliance (Sithole et al., 2025; Vlachopoulos & Makri, 2024). As a consequence, assessment design becomes a key site through which broader professional commitments are either reinforced or diluted in educational practice.

This tension reflects a broader challenge within management education, aligning competency-based frameworks with assessment practices that meaningfully capture complex, interdisciplinary, and values-based forms of learning. While prior research has examined curriculum reform and pedagogical innovation in sustainability and ethics education (Benn & Dunphy, 2009; O'Toole et al., 2026), comparatively little attention has been given to assessment as the key site where global standards, national professional expectations, and university practices converge. Understanding how global competency expectations are translated into assessment requirements across professional and institutional contexts is therefore central to advancing responsible management education.

This study addresses this gap by examining how ESG, sustainability, and ethics are embedded in documented assessments across multiple governance levels. Drawing on qualitative comparative document analysis, the study examines IFAC's IES, the national competency frameworks of CPA Australia and CA ANZ, and documented assessment practices in university accounting unit outlines. The study is guided by the research question: How do current approaches to embedding ESG, sustainability, and ethics in accounting assessment bridge or fail to bridge global standards and educational practice? While the empirical analysis focuses on undergraduate accounting unit outlines from Australian universities, this context is used as an analytically informative case through which broader issues of alignment between global standards and educational assessment practices can be examined.

By positioning assessment as a pedagogical mechanism rather than treating sustainability integration solely as a curriculum design issue, this study makes three contributions to the management education literature. First, it reframes the integration of ESG and ethics by foregrounding assessment design as a central mechanism through which professional competence is defined and legitimised within accounting education. Second, it provides a comparative, multi-level analysis of alignment and variation across global standards, professional frameworks, and university practices. Third, it offers practical implications for educators and professional bodies seeking to design assessment practices that better support sustainability-oriented learning and the development of responsible professional judgement.

Central to these contributions, the study introduces the concept of differential assessability as a complementary lens for understanding why some professional competencies are more readily translated into assessment than others. The concept provides a foundation for examining variation in assessment visibility across global standards, professional competency frameworks, and university assessment practices.

2. Assessment, sustainability and professional competence in management education

2.1. Sustainability and ethics

The integration of sustainability and ethics into management and accounting education has been widely discussed over the past two decades. Early work framed sustainability education as a curricular enhancement aimed at broadening managerial perspectives beyond short-term financial performance (Benn & Dunphy, 2009).

More recent scholarship positions sustainability and ethics as core elements of professional competence, requiring graduates to navigate complex trade-offs, stakeholder tensions, and value-laden decision environments (Narong, 2025; Venturelli, 2024). Within accounting education, researchers have argued that sustainability reporting, social responsibility, and ethical judgement challenge traditional conceptions of technical expertise and require educators to reconsider how competence is developed and evaluated (Cam & Ballantine, 2025; Khosa et al., 2025).

Despite this growing body of literature, empirical studies repeatedly highlight a disconnection between supported sustainability commitments and enacted educational practices (Cam & Ballantine, 2025; Khosa et al., 2025; Ransome, 2025). While sustainability and ethics are increasingly acknowledged in curriculum frameworks and accreditation requirements, their treatment within units often remains fragmented, peripheral, or content-focused rather than integrative and practice-oriented (Brennan & Quinton, 2020; Christensen et al., 2007; Sithole et al., 2025). This has led to calls within the management education literature to shift attention away from whether sustainability is “included” towards how it is meaningfully learned and enacted by students.

2.2. Assessment as a pedagogical signal

Within higher education, assessment is widely recognised as one of the most powerful determinants of student learning behaviour. Classic and contemporary scholarship emphasises that assessment does not merely evaluate learning outcomes but actively shapes what students prioritise, how they study, and how they conceptualise disciplinary knowledge and professional identity (Biggs & Tang, 2011; Fischer et al., 2024). From this perspective, assessment may function as a pedagogical signal, communicating what forms of knowledge and capability are valued within an educational unit.

In professional disciplines such as accounting and management, assessment plays a particularly influential role in mediating the transition from academic learning to professional practice. Recent accounting education research similarly demonstrates that the quality and design of learning experiences influence the development of broader professional capabilities. Studies of blended and flipped learning indicate that pedagogical innovations may remain only partially integrated in accounting education (Sawan et al., 2024), while evidence from accounting students highlights the importance of learning experiences for generic skills development (Sawan et al., 2024). More recently, generative AI has further complicated this relationship by creating opportunities to strengthen engagement, adaptability and higher-order skills while simultaneously creating risks for their development when its use is not strategically designed (Al-Hajaya et al., 2025).

When assessment focuses predominantly on technical knowledge reproduction, students may infer that ethical reasoning and sustainability considerations are secondary or optional rather than integral to professional judgement (David, 2025; Fischer et al., 2024). Conversely, when assessment tasks require students to engage with ambiguous, practice-based scenarios, there is greater potential for the development of integrative reasoning and ethical sensitivity (Boud & Falchikov, 2007). Despite its central role, assessment remains under-examined in much of the sustainability and ethics education literature, which has tended to prioritise curriculum design, pedagogical innovation, and learning outcomes. This relative neglect of assessment represents a significant gap in understanding how sustainability and ethical competencies are operationalised in educational practice.

Assessment theory has traditionally focused on the alignment between intended learning outcomes, teaching activities, and assessment tasks (Biggs & Tang, 2011), together with the influence of assessment on student learning behaviour and professional identity (Boud & Falchikov, 2007). These perspectives have established assessment as a central pedagogical mechanism but generally assume that intended competencies can be translated into assessable forms through appropriate assessment design. Comparatively little attention has been given to whether different types of competencies possess inherently different levels of assessability. In particular, competencies characterised by ethical judgement, sustainability-oriented reasoning, reflexivity, and value-based decision-making may present greater challenges for explicit assessment than competencies centred on technical knowledge or procedural accuracy. Recognising this distinction shifts attention from assessment design alone to the characteristics of the competencies being assessed.

2.3. Competency-based and authentic assessment

The growing emphasis on sustainability and ethics within professional education aligns with broader movements towards competency-based education. Competency frameworks conceptualise professional capability as the integration of knowledge, skills, values, and judgement applied in context, rather than as isolated technical proficiency (Al-Hajaya et al., 2025; Mulder, 2014; Samad, 2026; Sawan et al., 2024). In management education, this shift has been accompanied by increasing advocacy for authentic assessment approaches that resemble real-world professional tasks and evaluate students' ability to apply learning in complex situations (Merriam & Bierema, 2013; Schrage et al., 2025).

Authentic assessment is particularly relevant for sustainability and ethics education, where learning outcomes often involve judgement, reflexivity, and moral reasoning rather than definitive right or wrong answers. However, implementing such approaches

within accounting education remains challenging because of longstanding traditions of standardised examinations and concerns regarding reliability, objectivity, and accreditation requirements (De Lange et al., 2006; Jackling & De Lange, 2009; Nkhoma et al., 2018). These challenges highlight the need for a theoretical perspective that considers not only how assessments should be designed, but also whether different forms of professional competence are equally amenable to assessment. Competency-based education and authentic assessment represent important advances beyond traditional knowledge testing by emphasising holistic capability, contextual application, and professional judgement (Gulikers et al., 2004; Mulder, 2014). Existing assessment theories, including constructive alignment, competency-based education, and authentic assessment, explain how assessment should be aligned with intended learning outcomes to support learning (Biggs & Tang, 2011; Mesny et al., 2026). However, they generally assume that intended competencies can be translated into assessment with comparable effectiveness. As a result, they provide limited explanation for why some competencies are consistently represented within assessment while others receive comparatively less attention despite their recognised importance within professional standards.

To address this theoretical gap, this study introduces the concept of differential assessability, which proposes that professional competencies possess inherently different capacities to be operationalised, evidenced, and legitimised through prevailing assessment formats (Porta, 2026; Taylor & Huckle, 2024). Differential assessability refers to the unequal capacity of different competencies to be translated into observable and assessable forms within educational contexts. Competencies centred on technical knowledge and procedural accuracy are generally more readily evidenced through conventional assessment approaches than competencies requiring ethical judgement, sustainability-oriented reasoning, reflexivity, or value-based decision-making. Differential assessability therefore complements rather than replaces existing assessment theories. Whereas constructive alignment, competency-based education, and authentic assessment explain how assessment should support learning and competence development, differential assessability explains why competencies differ in their inherent capacity to be translated into assessment. In doing so, it provides a complementary theoretical perspective for understanding variation in the assessment of professional competence. The following section applies this concept within a conceptual framework to examine how competency expectations are translated across global standards, professional competency frameworks, and university assessment practices.

2.4. Conceptual framework: Alignment between standards, assessment, and learning

Drawing on assessment theory, competency-based education, authentic assessment, and insights from the sociology of education, this study adopts the conceptual framework presented in Fig. 1. Building on the concept of differential assessability introduced in Section 2.3, the framework illustrates how ESG, sustainability, and ethical competencies are translated across global standards, professional competency frameworks, and university assessment practices. The framework conceptualises this translation as an issue of both assessment alignment and assessment visibility across multiple governance levels.

As competencies are translated across these governance levels, those characterised by high assessability are more readily represented through explicit assessment tasks and therefore retain strong assessment visibility. In contrast, competencies characterised by low assessability are more likely to remain implicitly represented or embedded within broader assessment tasks, resulting in weak

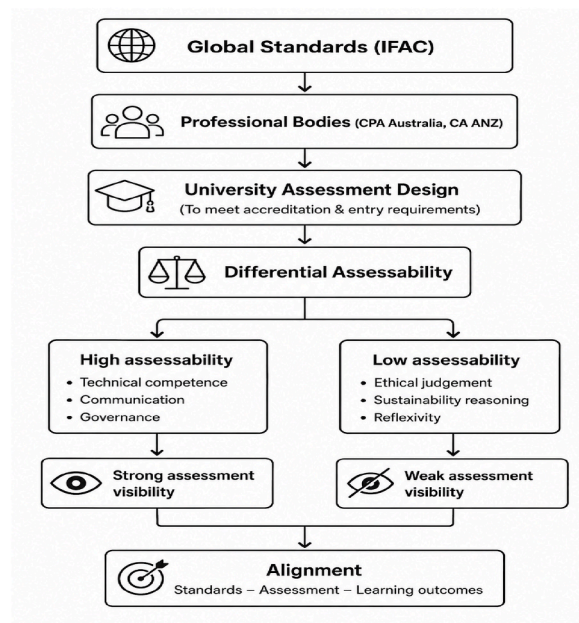


Fig. 1. Conceptual framework linking governance levels, assessment alignment, and differential assessability.
Source: Figure created by the authors

assessment visibility. The framework therefore applies differential assessability as the explanatory mechanism linking the characteristics of professional competencies with their representation in assessment.

Within this framework, misalignment arises when competencies related to sustainability and ethics are formally articulated within global standards, professional competency frameworks, or curriculum documentation but are not systematically translated into assessment expectations that support their development. When assessment prioritises competencies that are readily measurable, particularly technical knowledge and procedural accuracy, more integrative, value-laden competencies such as ethical judgement and sustainability-oriented reasoning are more likely to remain implicitly represented within assessment, resulting in weak assessment visibility despite their prominence within professional standards.

To clarify the analytical focus of the study, a distinction is drawn between discursive integration and operational integration of ESG, sustainability, and ethics. Discursive integration refers to the extent to which these competencies are embedded within the language and framing of professional standards, competency frameworks, and curricular discourse, where they are increasingly presented as integral to professional identity and public interest obligations. Operational integration, by contrast, concerns the translation of these competencies into assessment tasks, descriptions, learning outcomes, and documented assessment expectations through which students demonstrate professional capability. Within this framework, competencies characterised by high assessability are expected to be translated into explicit assessment, whereas competencies characterised by low assessability are more likely to remain implicit or only indirectly assessed. While discursive integration may signal a strong rhetorical commitment, its educational impact depends on whether and how these commitments are operationalised through assessment. Importantly, the International Education Standards articulate broad expectations regarding professional competence but do not prescribe specific assessment formats, intentionally creating interpretive space as standards are translated into professional frameworks and institutional assessment contexts.

This alignment perspective positions assessment as the mechanism through which global standards, professional expectations, and institutional practices converge. By examining how ESG, sustainability, and ethical competencies are represented within assessment expectations across global, professional, and university-level documentation, the study examines how competencies with high assessability tend to retain strong assessment visibility by being explicitly represented within documented assessment expectations, whereas competencies with low assessability are more likely to experience weak assessment visibility because they remain implicit, indirectly assessed, or embedded within broader assessment tasks as they move from standards into educational practice. In doing so, the framework provides a pedagogically grounded basis for analysing not only whether sustainability and ethics are included in accounting education, but also whether they achieve sufficient assessment visibility to influence student learning and professional judgement.

This perspective also aligns with the sociology of education, which emphasises that assessment is not a neutral process but one through which particular forms of knowledge and competence become institutionally recognised and legitimised (Everett et al., 2026). Within the present framework, differential assessability provides the explanatory mechanism linking the characteristics of professional competencies to their assessment visibility, helping to explain why some competencies are more consistently represented within assessment than others despite comparable prominence within professional standards.

3. Methodology: Comparative document analysis

3.1. Research design

This study adopts a qualitative comparative document analysis to examine how ESG, sustainability, and ethics are embedded within assessment expectations across multiple levels of governance in accounting education. Document analysis is an established methodological approach in education research, particularly suited to investigating how policy texts, standards, and frameworks articulate educational intentions, values, and assumptions about professional competence (Bowen, 2009; Kutsyuruba, 2023). Rather than treating documents as neutral artefacts, this approach recognises them as socially constructed texts that both reflect and shape educational practice. The analysis focuses on formal, documented assessment structures as representations of intended pedagogical priorities, rather than direct evidence of enacted teaching or learning.

A comparative design was employed to enable systematic analysis of alignment and divergence between global professional standards, professional accounting body competency frameworks, and assessment practices. This approach allows insight into how broad sustainability and ethical expectations are translated, interpreted, or constrained as they move from global policy discourse to educational and professional practice. The focus on assessment within these documents reflects the study's pedagogical orientation, positioning assessment as a key mechanism through which competency expectations are operationalised.

3.2. Data sources and document selection

The data set comprised publicly available, authoritative documents governing accounting education and professional formation. Documents were selected purposively based on their relevance to assessment, competence development, and sustainability or ethical expectations.

Documents were collected between June and September 2025 and reflect publicly available standards and university unit outlines current at the time of data collection. The professional standards analysed comprised the IFAC International Education Standards (IES 2, IES 3, IES 4, and IES 6, Revised, March 2025). Professional competency expectations were examined using the 2025 CPA Australia

and Chartered Accountants Australia and New Zealand Accreditation Guidelines, including Appendix 2 (Technical Competency Areas), Appendix 2A (Content Guidance Schedules), and Appendix 3 (Professional Competency Areas), all of which were current during the document collection period.

The analysis focused on three interconnected levels as shown in [Table 1](#): 1. Global professional education standards, specifically the International Federation of Accountants' IES, with particular attention to IES 2 (Technical Competence), IES 3 (Professional Skills), and IES 4 (Professional Values, Ethics and Attitudes), including recent revisions that explicitly reference sustainability-related competencies; 2. Professional accounting body competency frameworks, specifically those published by CPA Australia and CA ANZ, which shape both accreditation requirements and assessment practices within university accounting units; 3. Documented assessment practices in Australian universities offering accounting units, representing the point at which competency expectations are operationalised into concrete learning and evaluation activities.

These documents were selected because they collectively influence how accounting assessment is designed, implemented, and evaluated in practice. Focusing on Australian professional bodies while retaining a global reference point enabled a multi-level analysis that remains contextually grounded while addressing issues of international relevance.

The sample comprised 26 Australian universities offering accredited undergraduate accounting courses, representing 26 of 43 institutions (60%). Universities were selected purposively based on: (1) accreditation alignment with CPA Australia and/or Chartered Accountants Australia and New Zealand; (2) availability of publicly accessible unit outlines and assessment documentation; and (3) institutional diversity, including both Group of Eight (Go8) and non-Go8 universities. The sample spans all Australian states and territories where such courses are offered, ensuring broad geographic coverage. Universities not included were excluded primarily due to the absence of sufficiently detailed or publicly available assessment documentation. Given the study's qualitative, comparative design, this sample is sufficient to capture recurring patterns and variation in the embedding of ESG, sustainability, and ethics in documented assessment practices.

3.3. Analytical framework and coding approach

The analysis was guided by a conceptual framework that positions the embedding of ESG, sustainability, and ethics as an issue of assessment alignment. Drawing on competency-based education and literature on assessment as pedagogy, the study examined how competencies articulated in global standards and professional frameworks are translated into explicit and implicit assessment expectations ([Biggs & Tang, 2011](#); [Mulder, 2014](#)).

At the university level, assessment documentation was analysed as a collective dataset rather than as individual cases. A total of 104 undergraduate accounting unit outlines from 26 Australian universities were coded using the same framework applied to International Education Standards (IES 2, 3, and 4) and CPA Australia and Chartered Accountants Australia and New Zealand competency frameworks. The analysis focused on how ESG, sustainability, ethics, and professional judgement were positioned within assessment expectations. Unit outlines cited in the findings are presented as illustrative exemplars of broader patterns identified across the dataset, reflecting typical rather than extreme cases.

After coding the full dataset, recurrent patterns were identified across the 104 unit outlines. Illustrative examples were then purposively selected from unit outlines that clearly demonstrated these recurring themes. Each example was cross-checked against multiple documents to confirm that it represented a broader pattern identified across the dataset rather than an isolated or atypical case.

Table 1

Data sources and competency standards supporting the integration of sustainability, ethics, and ESG in accounting education.

Data source	Description	Details/Specific standards
1. IFAC Education Standards (IAESB)	International benchmarks guiding accounting education and professional competence. The 2025 revisions emphasise sustainability-related competencies.	• IES 2: Technical Competence (revised 2025), includes sustainability and ESG knowledge. • IES 3: Professional Skills, emphasises ethical judgement and sustainability integration. • IES 4: Professional Values, Ethics & Attitudes, updated to reflect sustainability-related ethics. • IES 6: Assessment of Professional Competence
2. CPA Australia/CA ANZ Competency Frameworks	Define the capabilities expected of professional accountants in Australia and New Zealand, incorporating sustainability and ethics.	• CPA Australia/CA ANZ (2025) • Appendix 2: Technical competency areas and learning outcomes • Appendix 3: Professional competency areas and learning outcomes - Section 3: Technical and professional competency areas and learning outcomes
3. University Accounting Unit Outlines and Assessment Documentation	Analysis of assessment tasks and learning outcomes in accounting units.	• Reviewed undergraduate accounting unit outlines. • Focus on learning outcomes, sustainability content, ethics education, and ESG-related assessment types (e.g., case studies, reports, presentations).

Note: CPA Australia - Certified Practising Accountant Australia; IES - International Education Standards.

IFAC - International Federation of Accountants.

Source: Table created by the authors

Coding proceeded in a structured, iterative manner. Documents were read multiple times to identify where ESG, sustainability, ethics, and social responsibility were explicitly or implicitly referenced, alongside assessment principles, descriptions of professional judgement and responsibility, and expectations regarding how competencies should be evaluated. Analysis then examined how these competencies were positioned relative to technical knowledge and assessment formats, with particular attention to whether assessment was framed as integrated and judgement-focused or as discrete and knowledge-based.

To enhance coding consistency, two researchers independently coded an initial subset of documents from all three data sources using the preliminary coding framework. Coding decisions were then compared, discrepancies discussed, and the coding framework refined until consensus was reached on category definitions and coding rules. The agreed framework was subsequently applied to the full dataset, with periodic cross-checking to ensure consistent interpretation across documents. Given the interpretive nature of qualitative comparative document analysis, coding differences were resolved through discussion and consensus rather than statistical measures of inter-rater agreement. An audit trail documenting coding decisions, framework refinements, and analytical memos was maintained throughout the study to enhance transparency and dependability.

Comparative analysis was then undertaken across document types to identify patterns of alignment and variation in how competencies are translated into assessment. The aim was not statistical generalisation, but to generate analytical insight into how assessment expectations evolve as standards are interpreted across governance levels. The use of transparent selection criteria, a consistent analytical framework, and authoritative publicly available documents supports the credibility and replicability of the study.

Coding was guided by a structured codebook developed from the study's conceptual framework and relevant literature on assessment, sustainability, and professional competence. The framework included categories relating to governance, sustainability and ESG, ethics, professional judgement, professional skills, sustainability reporting, explicit assessment integration, and implicit assessment integration. Each category was accompanied by operational definitions and coding rules to ensure consistent application across all document types.

Explicit integration was coded where ESG, sustainability, ethics, or related competencies were directly identified as assessable tasks. Implicit integration was coded where these competencies appeared only as contextual references, illustrative examples, background knowledge, or embedded components of broader technically oriented assessment tasks without being explicitly evaluated. Coding also recorded the assessment formats through which competencies were evaluated (e.g., examinations, case studies, presentations, reports, reflective tasks and group projects), together with any documented assessment weighting where this informed the

Table 2

Alignment of IFAC IES vs CPA Australia/CA ANZ TCA and university assessment practices.

Category	IFAC (IES 2, 3, & 4)	CPA Australia (TCA Framework)	Documented Forms of Assessment Referencing the Competency
Source	IES 2, 3, & 4: IES 2 Table A sections a,c,g,p; IES 3, Table A, c, p; IES 4, Table A sections b, i, p, v. Embedded in governance and risk management: 'Explain the principles of good governance ...' (IES 2, Table A, g, p. 48).	Appendix 2 : TCA and learning outcomes TCA01-TCA11; Appendix 2A : TCA content guidance schedules Covered under Business Acumen: 'Explain the principles of good governance ...' (TCA11, LO5).	26 Universities; 104 unit outlines
Governance			Referenced within capstone projects, governance-focused case studies, and integrated reporting assignments, typically as part of broader technical or strategic tasks rather than as a standalone assessment task.
Sustainability and Social Responsibility	'Prepare financial statements ... and sustainability disclosures ...' (IES 2, Table A, a, p. 46); 'Analyse ... scenario analysis' (IES 2, c, p. 47).	'Interpret reports including financial and non-financial data ... sustainability reports' (TCA02, LO5).	Embedded within financial reporting units, sustainability reporting projects, and IFRS S1/S2-related activities, most commonly contextualised within technical reporting tasks rather than assessed through explicit sustainability-focused criteria.
Environment	Environment, considered a key aspect of sustainability "describe the context in which the organisation operates, including ... sociocultural ... environmental ..." (IES 2, pp. 17,49).	Covered under Business Acumen: "Describe the environment in which an organisation operates, including ... social and cultural aspects ..." (TCA11, LO5).	Climate-related risks and social impact factors are occasionally incorporated into scenario analysis exercises, typically as contextual variables informing technical analysis rather than as explicit objects of assessment.
Ethics	'Apply fundamental principles of ethics ...' (IES 4, Table A, b, v. 58); 'Explain the importance of relevant ethical requirements to all professional activities' (IES 4, Table A, b, i, p. 58).	Ethics embedded in audit and governance: 'Explain the nature and purpose of auditing ... ethics and independence' (TCA03, LO1).	Addressed through ethics case studies, audit simulations, and reflective essays, with ethical reasoning frequently assessed conceptually or discursively rather than through applied ESG-focused decision scenarios.
Professional Skills	Intellectual curiosity and adaptability: 'Apply intellectual curiosity ...' (IES 3, Table A, c, p. 53); Collaboration: 'Demonstrate effective communication ...' (IES 3, b, p. 53).	Communication and teamwork implied: 'Analyse data and information ...' (TCA07, LO6); Leadership: 'Apply leadership skills ...' (TCA07, LO5).	Commonly assessed through group projects, presentations, leadership workshops, and peer evaluations, reflecting stronger alignment due to compatibility with established assessment formats.

Note: CPA Australia - Certified Practising Accountant Australia; IES - International Education Standards; IFAC - International Federation of Accountants; LO- Learning Outcome; TCA - Technical Competency Areas.

Source: Table created by the authors

visibility of competencies within assessment. Coding decisions were applied consistently across IFAC standards, professional competency frameworks, and university assessment documentation using the same operational definitions and coding rules. The coding criteria for evaluating alignment across governance levels are presented in [Appendix A](#), while [Appendix B](#) provides the coding framework and operational definitions used in the comparative document analysis.

4. Findings

This section presents the findings of a comparative analysis of documents spanning three interconnected governance levels in accounting education: the International Federation of Accountants' International Education Standards (IES 2, 3, and 4), the CPA Australia and Chartered Accountants Australia and New Zealand Technical Competency Areas (TCA 01–11), and documented assessment practices contained in undergraduate accounting unit outlines from 26 accredited Australian universities.

These data sources enable systematic comparison of how competency expectations are translated into assessment requirements as they move from global standards to professional frameworks and institutional contexts, forming the empirical basis for the comparative results presented in [Table 2](#). The findings reported in the table should be read with attention to how competencies are positioned within assessment documentation, including their visibility, framing, and relationship to dominant assessment formats. The analysis therefore distinguishes between the presence of competency references and their functional role within assessment design.

4.1. Alignment of ESG-related competencies across standards and assessment practices

Across the domains examined, governance; sustainability, social, and environmental considerations; ethics; and professional skills, alignment varies in both strength and form. Competencies that align with established professional or assessment traditions are more consistently reflected in documented university assessments, while those requiring judgement, reflexivity, or value-based reasoning exhibit greater divergence between formal expectations and assessment enactment. For example, IES 3 emphasises professional skills that are readily operationalised through existing assessment formats, including the ability to “apply professional judgement” and “demonstrate effective communication skills” (IES 3, Table A, sections c, p), which aligns closely with how universities assess presentations, group work, and written reports.

The following sections synthesise the principal patterns emerging from the comparative analysis presented in [Table 2](#), with data derived from IES 2 (Table A, sections a, c, g, p), IES 3 (Table A, sections c, p), and IES 4 (Table A, sections b, i, p, v), alongside [Appendix 2](#): TCA and learning outcomes (TCA01–TCA11) and [Appendix 2A](#): TCA content guidance schedules, and from a dataset comprising 104 unit outlines across 26 Australian universities. References to individual unit outlines in the sections that follow are used to illustrate these broader alignment and misalignment patterns, which were identified through comparative coding across the full sample of university assessment documents.

4.1.1. Patterns of alignment across competency domains

Across all three governance levels, governance and professional skills demonstrate the strongest overall alignment. In particular, TCA11 (Business Acumen) explicitly positions governance as a core professional capability, requiring graduates to “explain the principles of good governance, including the rights and responsibilities of owners, investors, and those charged with governance” and to analyse an organisation's governance framework ([Appendix 2](#): TCA11, LO5–LO6). IES 2 requires accountants to “explain the principles of good governance, including rights and responsibilities of owners, investors, and those charged with governance” (IES 2, Table A, section g), positioning governance as an integral element of professional competence rather than a discrete topic. These competencies are articulated relatively consistently within standards and professional frameworks and, critically, are more readily translated into assessable learning activities within university curricula. This is reflected, for example, in Unit Outline 2, which explicitly assesses students' ability to “communicate with various stakeholders using language and standards expected of business professionals,” a competency readily operationalised through presentations, group case work, and written reports. In contrast, sustainability and ethics display substantially lower levels of enacted alignment, despite their prominent inclusion within global and professional frameworks. This discrepancy suggests that while sustainability and ethical competence are widely acknowledged as essential attributes of professional accountants, their assessment remains less systematically embedded within university units.

The comparative evidence indicates that alignment is strongest where competencies can be assessed using established assessment formats, such as case studies, group projects, and presentations, and weakest where assessment requires engagement with ambiguity, competing values, or long-term social and environmental impacts.

4.1.2. Sustainability and ethics as discursively integrated competencies

This section examines how sustainability and ethical competencies are framed within global standards and professional competency frameworks, focusing on the language, positioning, and scope through which these capabilities are articulated as elements of professional competence. At the global level, professional competence is explicitly framed as multidimensional, encompassing technical expertise alongside ethics, sustainability awareness, and responsibility to the public interest.

This multidimensional framing is partially reflected in professional competency frameworks. For example, TCA02 requires graduates to “interpret reports including financial and non-financial data and information such as sustainability reports, integrated reports and extended external reporting” ([Appendix 2](#): TCA02, LO5), signalling formal recognition of sustainability-related competence. This framing is also explicit in IES 2, which requires professional accountants to “prepare financial statements in accordance with applicable financial reporting frameworks, including sustainability-related disclosures” and to “analyse the implications of uncertainty through

techniques such as scenario analysis” (IES 2, Table A, sections a, c), signalling sustainability as an expected element of professional judgement. At the level of professional values, IES 4 similarly embeds ethics as foundational, requiring accountants to “apply the fundamental principles of ethics” and to “explain the importance of ethical requirements to all professional activities” (IES 4, Table A, sections b, i). A similar pattern is evident in management accounting. TCA07 requires graduates to “explain ... ethical considerations in decision-making” (Appendix 2: TCA07, LO1), yet subsequent learning outcomes prioritise budgeting, costing, performance measurement, and quantitative analysis, with ethics positioned as contextual rather than directly assessable. These statements position ethics as pervasive rather than domain-specific.

Professional accounting body frameworks echo this framing, increasingly referencing sustainability, ethical conduct, and social responsibility within competency descriptions. This translation is evident in Appendix 2 of the CPA Australia and CA ANZ Technical Competency Areas, which incorporate sustainability, ethics, and governance across multiple competency domains rather than confining them to standalone topics (Appendix 2: TCA01–TCA11). At advanced level, this emphasis is particularly explicit. Unit Outline 34, for example, requires students to “identify, analyse and conceptualise a broad range of ethical and professional issues in accounting,” closely aligning with global standards that foreground professional judgement and ethical reasoning. However, this integration is predominantly rhetorical rather than operational. Although sustainability is acknowledged within TCA02 as an element of reporting interpretation, it is not articulated as a distinct competency with explicit assessment expectations, but rather embedded within broader financial reporting capabilities (Appendix 2: TCA02, LO1–LO7; Appendix 2A schedules).

While IES 4 also expects accountants to “act in the public interest” and to “respond appropriately to ethical dilemmas” (IES 4, Table A, sections p, v), these expectations are articulated at the level of professional conduct rather than accompanied by explicit guidance regarding how such judgement should be assessed within educational units. Unit Outline 101 includes ethics within its learning outcomes, requiring students to “discuss a broad range of ethical and legal accounting issues,” yet this outcome is articulated alongside, rather than integrated within, quantitative decision-making competencies. Sustainability and ethics are frequently articulated as high-level attributes or professional values, with limited specification regarding how these competencies should be demonstrated or evaluated through assessment. For example, Unit Outline 2 frames accounting as a mechanism to “address social responsibility, ethical conduct and sustainability,” positioning these capabilities as professional aspirations rather than as explicitly assessable competencies. This discursive framing is also evident in foundational units. Unit Outline 51 states that students should “evaluate the role and function of accounting in both business and society,” positioning social responsibility as a disciplinary purpose rather than as an explicitly assessed sustainability competency. As a result, ESG-related competencies are positioned more strongly at the level of professional identity and aspiration than as explicit, assessable learning outcomes within educational practice.

4.1.3. *Marginalisation of ESG and ethical competencies within assessment expectations*

This section examines how sustainability and ethical competencies are positioned within explicit assessment expectations as professional standards are translated into professional frameworks and university-level assessment documentation. The analysis focuses on the visibility, specificity, and weighting of sustainability and ethical considerations within assessment tasks, descriptions, learning outcomes and assessment expectations.

While global standards emphasise that assessment should evaluate integrated professional competence and judgement, this emphasis becomes progressively diluted as expectations are translated into professional and institutional frameworks. Notably, although IES 2 and IES 4 articulate explicit expectations regarding sustainability-related judgement and ethical conduct, they do not prescribe specific assessment formats or weighting strategies, leaving considerable interpretive space as these expectations are translated into professional frameworks and university assessment design, particularly where prevailing assessment traditions prioritise technical measurability (IES 2, Table A, sections a, c; IES 4, Table A, sections b, p). This is reinforced by the structure of the Technical Competency Areas (Appendix 2: TCA01–TCA11; Appendix 2A).

Assessment at the university level tends to privilege technical knowledge, accuracy, and compliance, with sustainability and ethical considerations often embedded implicitly rather than assessed directly. In Unit Outline 34, ethical competence is primarily assessed through a research essay and tutorial-based portfolio tasks, indicating that ethics is evaluated as conceptual analysis rather than through applied ESG-focused decision scenarios.

At the university level, sustainability and ethics are most commonly incorporated as contextual elements within technically oriented tasks, rather than as competencies warranting distinct assessment. In Unit Outline 2, students are required to “apply the accountability model to social and environmental information”, however, this requirement is embedded within a broader task and is not assessed through standalone sustainability-specific criteria. Consequently, although units may reference ESG and ethics in learning outcomes, there is limited structural emphasis ensuring these capabilities are systematically and explicitly assessed. This pattern reduces the pedagogical visibility of sustainability and ethical reasoning within overall assessment regimes.

4.1.4. *Tension between integrated professional competence and technically oriented assessment*

This section examines how expectations of integrated professional competence articulated in global standards are accommodated within prevailing assessment formats that prioritise standardisation, technical accuracy, and measurability. Attention is given to how judgement-focused, integrative competencies are assessed within examination-driven and time-bounded assessment structures commonly used in accounting education.

Global standards conceptualise competence as the ability to apply knowledge, skills, and values in complex, real-world contexts, a conception that has significant implications for assessment design when interpreted at institutional level, particularly in relation to uncertainty, judgement, and competing stakeholder considerations. IES 3 explicitly frames professional competence in terms of adaptability and judgement, including the capacity to “respond effectively to change” and “apply critical thinking to resolve complex

problems” (IES 3, Table A, sections c, p). Assessing such capabilities requires interpretive and reflexive assessment conditions that are difficult to fully capture through standardised, time-bounded formats.

In practice, however, professional and educational frameworks often assume assessment models grounded in standardisation and objectivity. While several TCAs recognise professional judgement, such as TCA02, which notes that accounting involves “the application of significant professional judgement” (Appendix 2: TCA02, LO2), the accompanying content guidance schedules primarily emphasise technical standards, calculations, and compliance-based knowledge, reinforcing technically oriented assessment practices (Appendix 2A). While examinations and tests can assess ethical or sustainability-related reasoning, particularly through scenario-based questions, these formats are structurally less well suited to making values-based judgement, reflexivity, and sustainability trade-offs visible and explicit. As a result, assessment practices tend to privilege what is readily measurable under time-bounded conditions, even as broader notions of professional competence are formally endorsed. For example, Unit Outline 51 allocates 40% of the final mark to a final examination and a further 25% to a mid-semester test. Regardless of content, the dominance of these high-stakes formats suggests priority towards technically oriented competence, despite broader references to accounting’s social role. This tension contributes to structural misalignment, whereby ESG and ethical competencies are acknowledged as important but remain difficult to assess authentically within prevailing assessment regimes.

The findings indicate that the challenge of embedding ESG, sustainability, and ethics in accounting education lies less in their formal recognition and more in their translation into assessable educational practice. While global standards articulate a holistic vision of professional competence, this vision becomes increasingly constrained as it is filtered through professional frameworks and institutional assessment contexts. Governance and professional skills benefit from stronger alignment due to their compatibility with existing assessment traditions, whereas sustainability and ethics remain inconsistently assessed despite their prominence in policy discourse. These patterns underscore the central role of assessment as a mediating mechanism between professional expectations and enacted learning outcomes, highlighting assessment design as a critical, yet under-addressed, lever for advancing sustainability-oriented accounting education.

5. Discussion

This study advances understanding of how ESG, sustainability, and ethics are embedded in accounting education by demonstrating that the key challenge lies not in their formal inclusion within standards and curricula, but in their translation into assessment practices. Throughout the paper, misalignment is understood not as a failure of standards to address sustainability and ethics, but as an outcome of how broadly framed professional expectations are interpreted and operationalised within assessment regimes.

A key insight emerging from the analysis is the role of differential assessability in shaping how competencies are enacted within educational practice. The findings suggest that misalignment is not solely a matter of interpretation or implementation, but is also structurally produced. Competencies that are more readily operationalised within conventional assessment formats, such as technical knowledge or communication skills, are more consistently and explicitly assessed. In contrast, competencies characterised by ambiguity, reflexivity, and value-based judgement, including sustainability-oriented reasoning and ethical decision-making, are less easily captured within standardised assessment structures and are therefore more likely to remain implicit or marginal. This highlights differential assessability as a key mechanism through which competencies are unevenly translated from standards into practice.

The findings reveal a persistent pattern of partial, uneven, and interpretive alignment across governance levels, in which sustainability and ethical competencies are clearly articulated in global standards and professional frameworks but are inconsistently and often implicitly enacted within documented university assessment practices. By positioning assessment as the mediating mechanism where professional competence is operationalised, the study contributes a more precise explanation for why sustainability integration in management education frequently remains aspirational rather than enacted (Alshhadat, 2025; Cam & Ballantine, 2025; Khosa et al., 2025; Ransome, 2025; Setó-Pamies & Papaoikonomou, 2016).

5.1. Assessment as a mediating mechanism of professional competence

The findings reinforce the central role of assessment as a mediating mechanism between competency frameworks and student learning. Consistent with established theory, assessment not only measures learning outcomes but may actively shape how students interpret disciplinary priorities and professional identity (Biggs & Tang, 2011; Boud & Falchikov, 2007; Fischer et al., 2024). Although ESG, sustainability, and ethical competencies are embedded within global standards and professional competency frameworks, their limited visibility within assessment and weighting reduces their pedagogical salience. This may signal to students that technically oriented knowledge and procedural accuracy remain the dominant markers of competence.

This finding extends prior research that has identified a gap between intended and enacted learning in sustainability education (Mesny et al., 2026; Sithole et al., 2025). While much of the literature attributes this gap to curriculum design, the present study demonstrates that assessment plays a more decisive role in shaping whether sustainability and ethics are meaningfully developed. Where assessment practices prioritise knowledge reproduction and standardised performance, opportunities for developing evaluative judgement, ethical reasoning, and sustainability-oriented decision-making are constrained (David, 2025; Fischer et al., 2024). Assessment may function as a mediating mechanism that determines which competencies are legitimised within educational practice.

This interpretation is consistent with evidence that the formal availability or adoption of pedagogical innovations does not necessarily result in their full integration into accounting students’ learning experiences. Sawan et al. (2024), for example, found that although technology was used within accounting education, blended learning and flipped-classroom approaches remained incompletely integrated. While their study concerns pedagogical technology rather than sustainability assessment, it illustrates a broader

implementation challenge relevant to the present findings: formal recognition or availability of an educational innovation does not ensure its operational embedding. The present study extends this issue to ESG and ethics by showing that the critical point of translation is assessment, where formally recognised competencies may remain educationally peripheral unless students are explicitly required to demonstrate them.

5.2. Differential assessability as a theoretical explanation

The findings provide empirical support for the concept of differential assessability proposed in Section 2.3. Competencies differed systematically in the extent to which they were translated into explicit assessment despite comparable prominence within global professional standards and competency frameworks. This pattern suggests that variation in assessment is influenced not only by assessment design but also by the differing capacities of professional competencies to be operationalised within prevailing assessment formats.

Across the three governance levels examined, competencies centred on technical knowledge, governance, and communication demonstrated relatively high assessability and consequently retained strong assessment visibility through explicit assessment tasks. In contrast, competencies requiring ethical judgement, sustainability-oriented reasoning, reflexivity, and value-based decision-making were more frequently embedded implicitly within broader assessment tasks, reducing their assessment visibility despite their explicit articulation within professional standards.

These findings extend existing assessment theory by demonstrating that alignment alone does not fully explain how competencies are translated into assessment practice. While constructive alignment, competency-based education, and authentic assessment emphasise the design of assessment to support learning (Biggs & Tang, 2011; Gulikers et al., 2004; Mulder, 2014), the findings indicate that competencies also differ in their inherent capacity to become explicitly represented within assessment. Differential assessability therefore provides a complementary explanation for the uneven translation of professional competencies into assessment practice, helping to explain why sustainability and ethical competencies frequently remain less visible than technically oriented competencies despite comparable policy emphasis.

5.3. Discursive integration and the problem of assessment visibility

The findings demonstrate a clear distinction between the discursive integration of ESG, sustainability, and ethical competencies and their operational integration within assessment practice. Across global standards and professional competency frameworks, these competencies are consistently presented as integral components of professional competence, reflecting an increasingly holistic conception of the accounting profession. However, this rhetorical commitment was only partially reflected in documented university assessment practices, where sustainability and ethical competencies were frequently embedded within broader technically oriented assessment tasks rather than explicitly represented as distinct assessment expectations.

This pattern suggests that discursive integration alone is insufficient to influence educational practice. Although sustainability and ethics are prominently articulated within professional standards, their educational significance depends on whether they are translated into explicit assessment that requires students to demonstrate these capabilities. Where competencies remain implicitly represented or are treated as contextual elements of broader assessment tasks, their assessment visibility is diminished, reducing their pedagogical prominence despite their recognised professional importance.

The distinction between discursive and operational integration also helps explain the uneven alignment identified across governance levels. Global standards and professional frameworks articulate broad competency expectations but intentionally allow flexibility in their implementation. As these expectations are interpreted within university assessment, competencies that align readily with established assessment traditions are more likely to be represented explicitly, whereas competencies requiring judgement, reflexivity, and sustainability-oriented reasoning are more likely to remain implicit. This finding reinforces the role of differential assessability as a mechanism explaining why professional competencies with comparable policy importance achieve different levels of assessment visibility.

These findings extend earlier research suggesting that sustainability initiatives may remain symbolic when they are not systematically embedded within educational practice (Brennan & Quinton, 2020; Christensen et al., 2007; Khosa et al., 2025; Ransome, 2025). Rather than viewing this as solely a curriculum design issue, the present study demonstrates that assessment plays a central role in determining whether sustainability and ethical competencies become educationally meaningful. The findings therefore suggest that meaningful integration depends not only on the inclusion of ESG and ethics within professional standards and curricula, but also on their explicit representation within assessment expectations that make these competencies visible, valued, and assessable.

The importance of translating sustainability commitments into substantive professional capability is also evident in the reporting environment for which accounting graduates are being prepared. Alshhadat (2025) identifies cultural influences, international best practice, competitiveness, reputation and legitimacy as important motivations for organisational sustainability reporting. These findings indicate that sustainability reporting is embedded within a broader institutional and stakeholder environment rather than functioning merely as a technical reporting exercise. From an educational perspective, this increases the importance of preparing graduates to exercise judgement about the organisational, ethical and societal dimensions of sustainability reporting. The present study extends this professional practice literature by showing that such expectations may be recognised discursively within standards while remaining comparatively weak in the assessment through which future accountants demonstrate competence.

5.4. Structural constraints and technically oriented assessment traditions

The findings highlight a persistent tension between the integrative conception of professional competence endorsed by global standards and the technically oriented assessment traditions that continue to shape accounting education. International standards emphasise a conception of professional competence that foregrounds judgement, adaptability, and responsibility in complex, real-world contexts. When translated into assessment regimes, however, these conceptual expectations encounter institutional constraints associated with standardisation, scalability, and accreditation (IFAC, 2019; 2023; Merriam & Bierema, 2013; Schrage et al., 2025). These expectations reflect broader shifts in management education towards developing higher-order capabilities such as critical thinking, adaptability, and ethical reasoning (Narong, 2025; O'Toole et al., 2026).

These tensions are becoming more significant as accounting education responds to generative artificial intelligence. Al-Hajaya et al. (2025) show that strategically integrated generative AI can support active learning, engagement, adaptability, critical thinking and analytical skills, while inappropriate use may also threaten the development of important graduate capabilities. This duality reinforces the limitations of assessment models centred primarily on knowledge reproduction and standardised technical performance. If contemporary accounting education is expected to develop judgement, critical evaluation and adaptability in technology-rich professional environments, assessment must increasingly require students to demonstrate how they evaluate information, justify decisions and exercise professional and ethical judgement. The challenge identified in the present study therefore extends beyond sustainability. Emerging professional competencies may remain weakly developed where assessment systems privilege capabilities that are easiest to standardise and measure.

In practice, however, assessment remains strongly influenced by traditions of standardisation, objectivity, and scalability. Examinations and structured assignments continue to dominate, reflecting longstanding concerns about reliability and accreditation (De Lange et al., 2006; Jackling & De Lange, 2009; Nkhoma et al., 2018). While such formats can incorporate elements of sustainability or ethics, they are less well suited to capturing the depth of reflexive and integrative judgement required in contemporary professional contexts.

This structural tension contributes to the marginalisation of ESG and ethical competencies. Capabilities that are more easily measurable within time-constrained and standardised formats are privileged, while those requiring engagement with ambiguity and competing values are less systematically assessed. This aligns with broader critiques that assessment systems tend to privilege what can be standardised over what is contextually complex (Boud & Falchikov, 2007; Gulikers et al., 2004; Vlachopoulos & Makri, 2024). It also reflects concerns that traditional accounting education may not fully prepare graduates for evolving professional and societal expectations (Guthrie & Parker, 2016).

5.5. Differential alignment across competency domains

The comparative analysis demonstrates that alignment across governance levels is not uniform but varies according to the nature of the competency being assessed. Governance and professional skills, including communication and collaboration, show relatively strong alignment across global standards, professional frameworks, and university assessment.

These competencies are more readily operationalised through established assessment formats such as case studies, presentations, and group work, which facilitate the evaluation of applied and interpersonal capabilities (Gulikers et al., 2004; Merriam & Bierema, 2013).

Professional practice further illustrates why an increasingly broad conception of competence is required. Alshhadat and Al-Hajaya (2023), for example, conceptualise effective governance under conditions of disruption around flexibility, IT infrastructure, risk management, internal control, and appropriate policies and procedures. Although developed in a corporate rather than educational context, this multidimensional view of governance reinforces the need for accounting education to prepare graduates to integrate technical expertise with adaptability, judgement and contextual decision-making. The comparatively strong assessment alignment observed for governance in the present study is therefore encouraging. However, it also raises an important qualification: strong alignment does not necessarily demonstrate that assessment captures the full multidimensional character of governance competence rather than its more readily assessable technical dimensions.

This emphasis on professional skills is consistent with Sawan et al. (2024), who demonstrate the importance of accounting students' teaching and learning experiences for generic skills development. Their findings reinforce the broader proposition that accounting education must develop capabilities extending beyond disciplinary technical knowledge. The present findings, however, reveal an important asymmetry within this broader competency agenda. While generic capabilities such as communication and collaboration are comparatively compatible with established assessment formats, sustainability-oriented reasoning and ethical judgement are less consistently made explicit within assessment. This suggests that expanding the range of competencies expected of accounting graduates is insufficient unless assessment design is also capable of making those competencies visible and consequential for student performance.

In contrast, sustainability and ethical competencies exhibit weaker enacted alignment despite their prominence in policy discourse. Their reliance on integrative, context-dependent judgement makes them more difficult to assess within conventional formats, contributing to their marginalisation. This finding extends existing work on competency-based education by demonstrating that not all competencies are equally amenable to assessment within prevailing institutional structures. It highlights the need for more nuanced and intentional assessment design that can accommodate the complexity, uncertainty, and value-laden nature of sustainability and ethics (Sithole et al., 2025; Venturelli, 2024).

5.6. Reframing sustainability integration as an assessment design challenge

The findings reframe the integration of ESG, sustainability, and ethics as an assessment design challenge rather than solely a curriculum issue. This perspective shifts attention towards the mechanisms through which professional competence is enacted, evaluated, and legitimised in educational practice. It aligns with calls for more holistic and practice-oriented approaches to sustainability education (Benn & Dunphy, 2009; Benn & Martin, 2017; O'Toole et al., 2026) and responds to the need for stronger alignment between competency frameworks and pedagogical practice.

The analysis also emphasises the importance of coherence across governance levels. While global standard setters have articulated a clear shift towards sustainability-oriented professional competence (IFAC, 2023; ISSB, 2023a; 2023b), this vision becomes progressively constrained as it is translated into professional frameworks and institutional assessment contexts. The absence of explicit assessment guidance within standards contributes to this misalignment, allowing ESG and ethical competencies to remain aspirational rather than systematically embedded.

This multi-level misalignment reflects broader challenges in aligning management education with evolving societal expectations, including those articulated through global sustainability agendas (Sharma & McLean, 2025; United Nations, 2015). Advancing responsible management education therefore requires not only curriculum reform but a fundamental reconsideration of how learning is assessed.

The limited embedding of ESG, sustainability, and ethics in accounting education is not due to a lack of recognition at the level of standards or curricula, but to challenges in their operationalisation through assessment. Assessment emerges as the key mechanism through which global expectations are translated into educational practice, shaping what is valued, developed, and legitimised as professional competence. By positioning assessment as the mediating mechanism, the study provides a stronger conceptual and practical foundation for advancing sustainability-oriented management education.

6. Implications

6.1. Theoretical implications

This study makes four related theoretical contributions to the literature on assessment and management education. First, it introduces differential assessability as a complementary theoretical construct for explaining why professional competencies differ in their capacity to achieve assessment visibility despite comparable prominence within professional standards. Whereas existing assessment theories focus primarily on how assessment should support learning and competence development, differential assessability explains variation in the extent to which different competencies can be translated into explicit assessment.

Second, the study extends assessment theory by integrating the concept of assessment visibility with established perspectives on constructive alignment, competency-based education, and authentic assessment. This demonstrates that effective alignment depends not only on assessment design but also on the differing capacities of competencies to become observable and assessable within prevailing educational contexts.

Third, the study contributes a multi-level conceptualisation of competency translation by demonstrating how assessment expectations are progressively interpreted across global standards, professional competency frameworks, and university assessment practices. This highlights assessment as the principal mechanism through which broad competency expectations become educationally enacted.

Finally, the study contributes to sustainability and ethics education by demonstrating that the inclusion of ESG, sustainability, and ethical competencies within professional standards does not necessarily result in equivalent assessment representation. Meaningful integration depends on whether these competencies achieve sufficient assessment visibility through explicit assessment practices, thereby extending debates beyond curriculum inclusion towards assessment as the principal mechanism through which professional competence is legitimised.

These contributions position differential assessability as a complementary theoretical perspective for understanding the relationship between professional competency frameworks and assessment practice. Rather than replacing established assessment theories, the concept explains an important dimension that has received comparatively limited theoretical attention: why competencies are translated into assessment with differing levels of visibility despite equivalent professional importance.

6.2. Practical implications

The findings have important implications for educators, professional bodies, accreditation agencies, and institutional leaders seeking to advance the meaningful embedding of ESG, sustainability, and ethics in accounting and management education.

For educators, the study highlights assessment design as the most immediate and impactful lever for change. While sustainability and ethics are increasingly included in learning outcomes, their weak differentiation within assessment risks signalling to students that these competencies are secondary to technical proficiency. Educators should therefore prioritise making ESG and ethical judgement explicit objects of evaluation, rather than treating them as contextual or peripheral considerations. This does not necessitate abandoning traditional assessment formats, but rather reconfiguring them to foreground integrative judgement, for example through scenario-based questions, sustainability reporting simulations, and tasks requiring justification of decisions in ethically complex contexts (Gulikers et al., 2004; Merriam & Bierema, 2013; Vlachopoulos & Makri, 2024). This need becomes more pressing as generative AI changes the conditions under which students acquire and demonstrate knowledge. Given evidence that GenAI may both

enhance higher-order skills and threaten their development depending on how it is integrated (Al-Hajaya et al., 2025), assessment should increasingly evaluate students' reasoning processes, critical evaluation, professional judgement and capacity to justify technology-supported decisions rather than merely the production of technically correct outputs.

For academic leaders and higher education institutions, the findings emphasise the importance of unit-level assessment coherence. Fragmented or isolated inclusion of sustainability tasks within individual units is unlikely to produce meaningful learning outcomes. Instead, institutions should adopt a more holistic approach, mapping how ESG and ethical competencies are developed and assessed progressively across sessions of study. This aligns with principles of constructive alignment (Biggs & Tang, 2011) but extends them by emphasising the need for cumulative reinforcement of integrative competencies, particularly those that are less easily assessed within traditional formats.

For professional accounting bodies and regulators, the findings highlight the limitations of competency articulation in the absence of explicit assessment guidance. While frameworks such as the IES and Technical Competency Areas increasingly embed sustainability and ethics, their diffusion across domains without clear evaluative expectations creates space for uneven interpretation. Professional bodies could strengthen alignment by supporting translation processes, for example through illustrative assessment exemplars that signal the legitimacy of assessing judgement, reflexivity, and sustainability-oriented reasoning alongside technical accuracy.

For accreditation and quality assurance bodies, the findings suggest a shift in emphasis from curriculum coverage to evidence of assessment alignment. Accreditation processes that focus primarily on whether sustainability is "included" risk reinforcing symbolic integration. Requiring institutions to demonstrate how ESG and ethical competencies are assessed, and how assessment tasks capture integrative and judgement-based capabilities, would strengthen accountability and encourage more meaningful pedagogical change.

For policy-makers and advocates of responsible management education, the study emphasises the importance of recognising assessment as a system-level lever for change. Global developments, including sustainability reporting standards and the United Nations Sustainable Development Goals, are reshaping expectations of professional competence (Sharma & McLean, 2025; United Nations, 2015). Aligning educational assessment with these expectations is critical to ensuring that graduates are equipped to navigate complex, sustainability-related challenges. Without such alignment, there is a risk that educational systems will lag behind evolving professional and societal demands.

Across all stakeholder groups, the findings point to the need for a shift towards authentic, integrative, and judgement-focused assessment practices. While such approaches introduce challenges related to reliability, scalability, and staff capability, they are essential for making sustainability and ethical competencies visible and consequential within learning.

Ultimately, advancing ESG and sustainability in management education depends not only on what is taught, but on what is assessed, and how assessment defines the boundaries of legitimate professional competence.

7. Limitations and directions for future research

While this study provides important insights into how ESG, sustainability, and ethics are embedded in accounting assessment, several limitations should be acknowledged, which also open avenues for future research. A primary limitation relates to the use of document analysis as the sole data source. The study examines global standards, professional competency frameworks, and university unit outlines to determine how competencies are translated into assessment. While this approach is appropriate for analysing formal expectations and structures (Bowen, 2009; Kutsyuruba, 2023), it does not capture how assessment is enacted in practice. Unit outlines may not fully reflect the complexity of assessment implementation, including how tasks are delivered, interpreted by educators, or experienced by students. Future research could address this limitation through empirical studies involving interviews, observations, or case studies, examining how ESG and ethical competencies are operationalised in classroom settings and how students engage with them.

Relatedly, the study does not examine student learning outcomes or perceptions, which limits insight into how assessment practices influence the development of sustainability-oriented competence. While assessment theory suggests that what is assessed shapes learning behaviour (Biggs & Tang, 2011; Fischer et al., 2024), empirical investigation is needed to understand how students interpret the presence or absence of ESG and ethics within assessment. Future research could explore student perspectives on assessment, including how they prioritise sustainability and ethical reasoning in response to different assessment designs.

A further limitation concerns the geographical and institutional scope of the analysis. The study focuses on Australian universities and professional accounting frameworks (CPA Australia and CA ANZ), while drawing on global standards such as the IFAC IES. Although this enables a multi-level analysis, the findings may not be fully generalisable to other national contexts with different regulatory, cultural, or institutional conditions. Comparative studies across jurisdictions could provide deeper insight into how local contexts influence the alignment between global standards and assessment practices, extending existing cross-national research on sustainability education (Khosa et al., 2025; Ransome, 2025).

The study is also limited by its focus on formal assessment structures rather than informal or hidden curriculum elements. Sustainability and ethics may be developed through classroom discussion, educator practices, and institutional culture, which are not captured in formal documentation. Future research could adopt a broader lens to examine how formal and informal learning environments interact to shape the development of ESG-related competencies.

These limitations highlight the need for further research that moves beyond document-level analysis to examine how sustainability and ethics are enacted, experienced, and developed through assessment in practice. Future studies that integrate multi-method approaches and cross-national comparisons would contribute to an understanding of how assessment can support the development of responsible, sustainability-oriented professionals in management education.

8. Conclusion

This study examined how ESG, sustainability, and ethics are embedded in documented university accounting assessments and how effectively current practices align with global professional standards. The findings reveal a consistent pattern of partial and uneven alignment. Although grounded in the Australian context, the patterns identified are indicative of broader structural tensions in the alignment between global standards and educational assessment practices. While sustainability and ethical competencies are clearly articulated in standards and frameworks, they remain implicitly and inconsistently assessed in educational practice.

The analysis shows that the key challenge lies not in recognising these competencies, but in translating them into assessable forms of professional capability. Assessment practices continue to prioritise technically oriented and standardised forms of evaluation, limiting the visibility and development of sustainability-oriented judgement and ethical reasoning. As a result, there is a disconnect between the integrative conception of professional competence promoted at the global level and the competencies that are reinforced through assessment.

Beyond reframing ESG integration as an assessment design challenge, this study introduces differential assessability as a novel theoretical construct explaining why competencies are unevenly translated from professional standards into educational assessment. The concept extends existing assessment theory by highlighting that competencies differ in their capacity to become explicitly visible and legitimate within prevailing assessment systems. It highlights that assessment may be a mechanism through which professional competence is constructed and communicated to students. Without explicit and intentional assessment, sustainability and ethical competencies risk remaining aspirational rather than enacted.

Ultimately, advancing sustainability in accounting and management education depends not only on what is taught, but on what is assessed. Strengthening alignment between standards, assessment, and learning is essential to developing graduates capable of exercising responsible and sustainability-oriented professional judgement. Beyond identifying gaps in ESG assessment, this study introduces differential assessability as a novel theoretical lens for explaining why professional competencies are translated into assessment with differing levels of visibility despite equivalent prominence in professional standards. In doing so, the study extends existing assessment theory by explaining not only how assessment should be aligned, but also why some competencies remain systematically underrepresented within prevailing assessment systems.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Coding criteria for alignment across the three governance levels (IFAC, CPA Australia/CA ANZ, and university assessment)

Alignment Level	Operational Criteria	Illustrative Example Across Governance Levels
Strong alignment	The competency is explicitly articulated in IFAC standards, explicitly retained in CPA Australia/CA ANZ competency frameworks, and explicitly represented within university assessment tasks, learning outcomes, or assessment criteria. The competency remains consistently visible across all three governance levels.	A competency is explicitly identified within IFAC standards, retained as an explicit competency within CPA Australia/CA ANZ frameworks, and directly assessed through identifiable university assessment tasks, learning outcomes, or assessment criteria.
Moderate (Partial) alignment	The competency is explicitly articulated in IFAC standards and professional competency frameworks but is embedded within broader university assessment tasks rather than explicitly assessed. The competency remains visible across governance levels but loses assessment prominence during translation.	A competency is explicitly identified within IFAC standards and CPA Australia/CA ANZ frameworks but is incorporated within broader university assessment tasks without separate assessment criteria or explicit weighting.
Weak alignment	The competency is clearly articulated in IFAC standards and/or professional competency frameworks but is only indirectly represented, implicitly embedded, or absent from documented university assessment. Assessment focuses primarily on technical content, with the competency functioning as contextual rather than explicit.	A competency is explicitly identified within IFAC standards and recognised within CPA Australia/CA ANZ frameworks but is only indirectly referenced, implicitly embedded, or absent from documented university assessment, functioning primarily as contextual background rather than an explicitly assessed competency.

Appendix B. Coding framework and operational definitions

(continued on next page)

(continued)

Domain	Category	Explicit integration (Operational definition)	Explicit inclusion criteria	Illustrative explicit example	Implicit integration (Operational definition)	Implicit inclusion criteria	Illustrative implicit example
A. Sustainability competencies	ESG	ESG is explicitly identified as an assessable competency.	Assessment task or learning outcome directly evaluates ESG knowledge, analysis or application.	Students prepare an ESG strategy or evaluate ESG performance.	ESG is referenced but not directly assessed.	ESG appears only as contextual information or background.	ESG discussed within a financial reporting case, but marks awarded only for technical accounting.
	Sustainability	Sustainability knowledge or sustainability-oriented reasoning is directly assessed.	Assessment explicitly requires evaluation of sustainability impacts, challenges or strategies.	Sustainability impact assessment or sustainability strategy report.	Sustainability is acknowledged but not evaluated independently.	Sustainability appears in unit descriptions, learning outcomes or case studies without being assessed.	Sustainability discussed in content but absent from assessment.
	Social Responsibility	Social responsibility is explicitly assessed as part of professional competence.	Assessment explicitly evaluates stakeholder accountability, community impacts, social value, or corporate social responsibility.	Corporate social responsibility analysis or stakeholder impact assessment.	Social responsibility is acknowledged but not independently assessed.	Social responsibility appears within competency statements, case studies or unit descriptions without explicit assessment.	Corporate social responsibility discussed in a case study but assessment focuses on financial analysis.
	Environmental competence	Environmental issues are explicitly assessed as part of professional competence.	Students analyse environmental risks, climate impacts or environmental management.	Climate-risk assessment or environmental performance analysis.	Environmental issues provide contextual background only.	Environmental factors appear within scenarios but are not assessed separately.	Climate change described in case study while marks focus on financial calculations.
	Sustainability reporting	Sustainability frameworks are directly assessed.	Students prepare, interpret or evaluate sustainability disclosures using recognised frameworks.	IFRS S1/S2 sustainability reporting assignment.	Sustainability reporting is mentioned but not independently evaluated.	Sustainability disclosures appear within broader financial reporting tasks.	Sustainability disclosures included in an annual report assignment but assessed primarily on technical reporting accuracy.
B. Professional competencies	Ethics	Ethical reasoning or ethical decision-making is explicitly assessed.	Assessment requires analysis of ethical dilemmas or application of professional ethical principles.	Ethical dilemma analysis or professional ethics case study.	Ethics is recognised but not directly assessed.	Ethics appears in learning outcomes or competency statements without being assessed.	Ethics referenced as a professional expectation but not assessed.
	Professional values	Professional values such as integrity, accountability, independence or public interest are directly evaluated.	Assessment requires demonstration or justification of professional values.	Reflection on professional responsibility or integrity case.	Professional values are acknowledged but remain aspirational.	Values are discussed within standards or unit descriptions only.	Unit emphasises integrity but assessment measures only technical knowledge.
	Professional judgement	Professional judgement is explicitly evaluated.	Students justify decisions, evaluate alternatives or defend recommendations.	Audit judgement case requiring justification of conclusions.	Judgement underpins the task but is not separately assessed.	Technical decisions are made without explicit evaluation of judgement quality.	Assessment focuses on correctness only.
	Governance	Governance knowledge or governance practice is directly assessed.	Assessment evaluates governance structures, accountability or oversight.	Corporate governance case study or governance evaluation report.	Governance provides contextual background only.	Governance discussed in organisational context without explicit assessment.	Governance referenced in case introduction but assessment focuses on financial performance.
	Technical competence	Technical accounting knowledge is explicitly assessed.	Assessment directly evaluates accounting standards, calculations or compliance.	Financial reporting examination or taxation calculations.	Technical knowledge provides supporting context only.	Technical concepts appear within broader discussions without independent evaluation.	Accounting concepts described in background reading only.
C. Professional skills	Communication	Oral or written communication is explicitly assessed.	Assessment allocates marks for written communication, presentation or professional reporting.	Group presentation assessing communication skills.	Communication is expected but not independently evaluated.	Students present findings without explicit assessment of communication skills	Assessment awards marks for technical content only.
	Collaboration	Teamwork or collaborative	Assessment includes peer evaluation or	Group project with teamwork assessment.	Students work collaboratively	Collaboration is required but not formally evaluated.	Group assignment marked only on final report.

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	practice is explicitly assessed.	assessment of teamwork.		without teamwork assessment.		
Leadership	Leadership capability is directly assessed.	Assessment requires leadership behaviours or leadership decision-making.	Leadership simulation or organisational leadership case.	Leadership is discussed but not assessed.	Leadership appears within competency statements only.	Leadership mentioned in unit aims but absent from assessment.
Critical thinking	Critical analysis or evaluation is explicitly assessed.	Students critique evidence, evaluate alternatives or synthesise arguments.	Critical evaluation of sustainability strategies.	Critical thinking is assumed but not explicitly measured.	Assessment emphasises factual recall or procedural knowledge.	Examination tests technical knowledge without evaluating reasoning.
Reflexivity	Reflection on assumptions, learning or professional practice is explicitly assessed.	Assessment requires reflective writing or self-evaluation.	Reflective journal on ethical decision-making.	Reflection is encouraged but not assessed.	Reflection appears in learning activities without assessment weighting.	Reflection not assessed.

References

- Al-Hajaya, K., Almasarwah, A., Eltwari, A., Alshhadat, M., & Edghiem, F. (2025). *Generative AI for accounting education: Approaches to learning and soft skills development*. Working Paper No. 5130005.
- Alshhadat, M. Q. (2025). The determinants of sustainability reporting: Evidence from Saudi petrochemical companies. *Journal of Financial Reporting & Accounting*, 23(6), 2641–2658. <https://doi.org/10.1108/JFRA-04-2023-0216>
- Alshhadat, M. Q., & Al-Hajaya, K. (2023). Corporate governance in the COVID-19 pandemic: Current practices and potential improvement. *Corporate Governance: International Journal of Business in Society*, 23(7), 1607–1622. <https://doi.org/10.1108/CG-05-2022-0203>
- Benn, S., & Dunphy, D. (2009). Action research as an approach to integrating sustainability into MBA programs. *Journal of Management Education*, 33(3), 276–295. <https://doi.org/10.1177/1052562908323189>
- Benn, S., & Martin, A. (2017). Learning and change for sustainability reconsidered: A role for boundary objects. *The Academy of Management Learning and Education*, 9(3), 397–412. <https://doi.org/10.5465/amle.9.3.zqr397>
- Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university* (4th ed.). McGraw- Hill.
- Boud, D., & Falchikov, N. (2007). *Rethinking assessment in higher education: Learning for the longer term*. Routledge.
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27–40. <https://doi.org/10.3316/QRJ0902027>
- Brennan, M., & Quinton, H. W. (2020). An ethical re-framing of curriculum for sustainability education. *Curriculum Perspectives*, 40, 105–110. <https://doi.org/10.1007/s41297-019-00095-z>
- Cam, O., & Ballantine, J. (2025). Exploring accounting academics' views on sustainability: A Freirean dialogical pedagogic perspective. *The British Accounting Review*, 58(3), Article 101633. <https://doi.org/10.1016/j.bar.2025.101633>
- Christensen, L. J., Peirce, E., Hartman, L. P., Hoffman, W. M., & Carrier, J. (2007). Ethics, CSR, and sustainability education in the Financial Times Top 50 Global Business Schools: Baseline data and future research directions. *Journal of Business Ethics*, 73(4), 347–368. <https://doi.org/10.1007/s10551-006-9211-5>
- David, J. O. (2025). Redefining assessment for sustainability: A reflective approach to curriculum transformation in environmental education. In *Frontiers in education* Frontiers Media SA, Article 1553999.
- De Lange, P., Jackling, B., & Gut, A.-M. (2006). Accounting graduates' perceptions of skills emphasis in undergraduate courses: An investigation from two Victorian universities. *Accounting and Finance*, 46(3), 365–386. <https://doi.org/10.1111/j.1467629X.2006.00173.x>
- Everett, S., Carden, R., & Linton, K. (2026). Measuring what matters: Evaluating the impact of curriculum decolonisation initiatives in UK business schools. *British Educational Research Journal*, 1–23. <https://doi.org/10.1002/berj.70158>, 00.
- Fischer, J., Bearman, M., Boud, D., & Tai, J. (2024). How does assessment drive learning? A focus on students' development of evaluative judgement. *Assessment & Evaluation in Higher Education*, 49(2), 233–245. <https://doi.org/10.1080/02602938.2023.2206986>
- Gulikers, J. T. M., Bastiaens, T. J., & Kirschner, P. A. (2004). A five-dimensional framework for authentic assessment. *Educational Technology Research and Development*, 52(3), 67–86. <https://doi.org/10.1007/BF02504676>
- Guthrie, J., & Parker, L. D. (2016). Whether the accounting profession, accountants and accounting researchers? Commentary and projections. *Accounting, Auditing & Accountability Journal*, 29(1), 2–10. <https://doi.org/10.1108/AAAJ-10-2015-2263>
- International Federation of Accountants (IFAC). (2019). *Handbook of international education standards*. IFAC. <https://www.ifac.org>.
- International Federation of Accountants (IFAC). (2023). *International education standards: Building sustainability and professional competencies*. IFAC. <https://www.ifac.org>.
- International Sustainability Standards Board (ISSB). (2023a). *International financial Reporting Standard S2: Climate related disclosures*. IFRS Foundation. <https://www.ifrs.org>.
- International Sustainability Standards Board (ISSB). (2023b). *International Financial Reporting Standard S2: Climate-related disclosures*. IFRS Foundation. <https://www.ifrs.org>.
- Jackling, B., & De Lange, P. (2009). Do accounting graduates' skills meet the expectations of employers? A matter of convergence or divergence. *Accounting Education: International Journal*, 18(4–5), 369–385. <https://doi.org/10.1080/09639280902719341>
- Jain, A., Naik, K. R., Kakade, K., Bhanot, S., & Kulkarni, S. C. (2025). Reimagining management education: Navigating the shift to education 4.0 in the digital era. *International Journal of Management in Education*, 23(2), Article 101182. <https://doi.org/10.1016/j.ijme.2025.101182>
- Khosa, A., Pandey, R., & Wilkin, C. (2025). Accounting curricula and climate-related sustainability: Evidence from Australia and New Zealand universities. *Accounting Education*, 34(6), 1026–1048. <https://doi.org/10.1080/09639284.2024.2376739>
- Kutsyruba, B. (2023). Document analysis. In J. M. Okoko, S. Tunison, & K. D. Walker (Eds.), *Varieties of qualitative research methods*. Springer texts in education. Cham: Springer. https://doi.org/10.1007/978-3-031-04394-9_23.
- Merriam, S. B., & Bierema, L. L. (2013). *Adult learning: Linking theory and practice*. John: Wiley & Sons.

- Mesny, A., Roberge-Maltais, I., & Galy, A. (2026). Innovative assessment and grading practices in higher education: A critical exploration for management educators. *International Journal of Management in Education*, 24(1), Article 101307. <https://doi.org/10.1016/j.ijme.2025.101307>
- Mulder, M. (2014). Conceptions of professional competence. In S. Billett, C. Harteis, & H. Gruber (Eds.), *International handbook of research in professional and practice-based learning*. Springer. https://doi.org/10.1007/978-94-017-8902-8_5, 107–137.
- 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). *International Journal of Management in Education*, 23(2), Article 101115. <https://doi.org/10.1016/j.ijme.2024.101115>
- Nkhoma, C., Nkhoma, M., & Tu, L. K. (2018). Authentic assessment design in accounting courses: A literature review. *Issues in Informing Science and Information Technology*, 15(1), 157–190. <https://doi.org/10.28945/4036>
- O'Toole, J., Benati, K., Beamish, A., Guy, M., & Interigi, F. (2026). Enhancing critical and creative thinking in sustainability education through reflective practice and project-based learning. *International Journal of Management in Education*, 24(2), Article 101364. <https://doi.org/10.1016/j.ijme.2026.101364>
- Porta, T. (2026). Planning and refining differentiated and accessible assessments. In *Backward planning for inclusive classrooms: Inclusion by design* (pp. 69–86). Cham: Springer Nature Switzerland.
- Ransome, E. (2025). The sustainability integration framework: A new model for embedding sustainability in UK universities. *International Journal of Sustainability in Higher Education*, 27(7), 1–38. <https://doi.org/10.1108/IJSHE-07-2025-0628>
- Samad, M. R. (2026). Competency based learning models in vocational education: A Literature Review. *Journal of Vocational Education and Technical Engineering*, 1(1), 1–9. <https://doi.org/10.64850/jovete.v1i1.188>
- Sawan, N., Al-Hajaya, K., Alshhadat, M., & Salem, R. I. A. (2024). Accountancy students' perceptions of the quality of teaching and learning experiences in two UK business schools: Implications for generic skills development. *Journal of International Education in Business*, 17(2), 246–264. <https://doi.org/10.1108/JIEB-08-2023-0057>
- Schrage, B., Maheshwari, G., & Velasquez, S. (2025). Broadening the competencies of MBA students in Vietnam: Integrating andragogical approaches with sustainable development goals. *International Journal of Management in Education*, 23(3), Article 101217. <https://doi.org/10.1016/j.ijme.2025.101217>
- Setó-Pamies, D., & Papaioikonomou, E. (2016). A multi-level perspective for the integration of ethics, CSR and sustainability in management education. *Journal of Business Ethics*, 136(3), 523–538. <https://doi.org/10.1007/s10551-014-2535-7>
- Sharma, E., & McLean, G. N. (2025). Corporate social responsibility, the United Nations' sustainable development goals and financial performance, with implications for human resource development. *European Journal of Training and Development*, 49(5–6), 516–532. <https://doi.org/10.1108/EJTD-10-2023-0151>
- Sithole, S. T. M., Ashraf, S. F., Wilmshurst, T. D., & Horner, C. (2025). The role of social responsibility in shaping quality assurance practices in accounting education. *International Journal of Management in Education*, 23(2), Article 101155. <https://doi.org/10.1016/j.ijme.2025.101155>
- Taylor, C. A., & Huckle, J. (2024). The Academic Assessment Machine: Posthuman possibilities of/for doing assignments and assessments differently. *Qualitative Inquiry*, 30(8–9), 724–733. <https://doi.org/10.1177/10778004231196186>
- United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. United Nations. <https://sdgs.un.org/2030agenda>.
- Venturelli, A. (2024). Towards a sustainable future: Competencies, regulations, and paradigm shifts in education. *The routledge handbook of accounting for the sustainable development goals*. Routledge. pp. 517–526.
- Vlachopoulos, D., & Makri, A. (2024). A systematic literature review on authentic assessment in higher education. *Best practices for the development of 21st century skills, and policy considerations. Studies in Educational Evaluation*. , Article 101425. <https://doi.org/10.1016/j.stueduc.2024.101425>