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Accounting curricula and climate-related sustainability: evidence from Australia and New Zealand universities

Amrinder Khosa^a, Rakesh Pandey^a and Carla Wilkin^b

^aTasmanian School of Business and Economics, University of Tasmania, Launceston, Australia; ^bDepartment of Accounting, Monash University, Melbourne, Australia

ABSTRACT

To address climate-related sustainability risks, the global financial system has implemented standards that require entities to disclose information in their financial statements regarding governance processes, controls, and strategies for managing climate-related risks and opportunities. As a result, accountants require knowledge and skills for recording, reporting, measuring and advising on these matters. In response, our study investigates the extent to which climate-related sustainability topics are evident in accounting curricula at 42 Australian and New Zealand universities. Following data collection between November 2022 and April 2023, using contextual thematic analysis, we analyze 1520 subjects and their 7590 intended learning outcomes (ILOs) from 42 undergraduate and 40 postgraduate accounting courses. Findings show that climate-related sustainability is referenced in only 232 subjects and 355 ILOs. As such, since most subjects have only one ILO related to climate-related sustainability, the topic would seem to typically be addressed through adaptations to existing subjects. Further, given the significant number of universities with ≤ 4 subjects that make reference to climate-related sustainability topics, together with a focus on skills being evident in only 91 ILOs, our findings suggest that much remains to be done to develop accountants' requisite knowledge and skills.

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Introduction

The aim of this study is to investigate the extent to which accounting curricula in Australian and New Zealand universities are addressing the challenges for the accounting profession generated by new financial reporting requirements associated with climate-related sustainability. Specifically, from January 2024, two IFRS standards¹ issued by the International Accounting Standards Board require entities² to disclose information in their financial statements regarding governance processes, controls and strategies for managing climate-related risks and opportunities (IFRS, 2023a, 2023b, 2023c,

CONTACT Amrinder Khosa  amrinder.khosa@utas.edu.au

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2023d; TCFD, 2021). As such, accounting professionals' roles may now require them to: promote globally consistent climate metrics; deliver independent assurance over entities' climate reporting; and translate the requirements of stakeholders (such as investors) into the required material metrics and disclosures (IFRS, 2020, 2023d; Kummer, 2021; SEC, 2010). In this context, consistent with human capital theory, there is an urgent need to ensure accountants' productive capacity and skills through appropriate education (Becker, 1975; Klees, 2016).

Our study is relevant and timely, given findings that show the need to broaden the scope of accounting education such that accountants acquire the knowledge and skills required to support entities in responding to climate change (i.e. Al-Hazaima et al., 2021; Boyce et al., 2019; Kummer, 2021; Linnenluecke et al., 2015). Whilst there is evidence of embedding sustainability in accounting curricula through subject-level interventions (e.g. Hazelton & Haigh, 2010; Lee et al., 2017; Sharma & Kelly, 2014), the extent and focus of this integration is unclear. For example, a recent survey of tertiary institutions in 45 countries shows a lack of systematic approaches to embedding climate change education into their curricula (Molthan-Hill et al., 2019).

To address our aim, we adopt the following research question:

RQ: To what extent are climate-related sustainability topics evident in subjects offered as part of accounting courses offered by universities in Australia and New Zealand?

We focus on Australia and New Zealand because both: (1) adopted IFRS standards in 2007, such that their accounting practices are consistent with other countries (IFRS, 2021); (2) are signatories to the Paris Agreement on climate change (UN Climate Press Release, 2022); (3) are committed to mandatory reporting by large entities (CA ANZ, 2024; Ministry for the Environment, 2023); and (4) their two key professional accounting bodies (CPA and CA ANZ³) acknowledge the important role for accountants regarding 'climate change mitigation and adaptation' (CA ANZ, 2024, p. 1.) including 'actively consider[ing] the materiality of relevant climate-related risks when preparing, approving and auditing financial statements' (CPA, 2023a, p. 28). To investigate this question, between November 2022 and April 2023, we collected data regarding the inclusion of climate-related sustainability topics into accounting courses from publicly available webpages of 36 Australian and 6 New Zealand universities⁴ that offer accounting courses accredited by CPA Australia and CA ANZ.⁵ Data was manually collected and analyzed for all subjects⁶ in the 42 undergraduate and 40 postgraduate accounting courses offered by these 42 universities.⁷ Our focus includes (1) core accounting subjects; (2) core business subjects; (3) specialization subjects; and (4) specified electives available, together with their Intended Learning Outcomes (ILOs).

Contribution

Our findings indicate legitimate efforts to broaden tertiary accounting education in Australia and New Zealand to accommodate accountants' new roles required to support entities' obligations regarding climate-related sustainability. However, the topic is typically being afforded insufficient focus. Of the 1520 subjects identified as being offered at these 36 Australian and 6 New Zealand universities, only 232 (15%) subjects make some reference to topics associated with climate-related sustainability. Of

these, 122 are classified as accounting subjects and 110 as non-accounting subjects. Indeed, there appears to be a lack of systematic approaches to embedding this content: six (14%) of the 42 universities deliver 33% of the 232 identified subjects; 22 (52%) offer coverage in ≤ 4 accounting subjects. As a significant number of subjects had a single ILO related to climate-related sustainability, the topic would appear to be included through adaptations to existing subjects. This suggests existing coverage relates to students acquiring some awareness and ownership of the topic (knowledge), rather than technical skills. In the context of the acknowledged constraints upon accounting curricula related to requirements for accreditation by the professional bodies (Aldamen et al., 2021; Birt et al., 2023), our findings indicate an urgency for them to formalize their commitment by incorporating some specific guidelines into their Technical Competency Areas (TCAs) and Professional Competency Areas (PCAs). Thus, our findings contribute knowledge about developing the required human capital for managing climate-related sustainability by reporting on the extent to which climate-related sustainability topics are embedded in accounting courses offered in Australian and New Zealand universities; and providing future directions for accounting educators and professional bodies to address the need to train future accountants for roles related to recording, evaluating, and reporting climate-related impacts.

The remainder of the paper is organized as follows. The next section provides the background, with the research methodology outlined in the following section. After detailing our findings, we discuss and present our conclusions, together with the study's limitations and avenues for future research.

Background

Climate-related sustainability is becoming increasingly important, with anthropogenic climate change described as the biggest and most pervasive threat of the current century, being driven by accelerated burning of fossil fuels and deforestation. For example, about 51 billion tons of greenhouse gas emissions are currently generated annually, with these contributing to global warming and sequential climate-related impacts, such as the risk of extinction of 500 wildlife species in Australia (Kummer, 2021; UN, 2022; WWF Australia, 2023). Given the global impact of the risks associated with climate change, in 2015 the Financial Stability Board⁸ established the Task Force on Climate-related Financial Disclosures (TCFD). The TCFD's purpose was 'to develop recommendations on the types of information that companies should disclose to support investors, lenders, and insurance underwriters in appropriately assessing and pricing a specific set of risks – risks related to climate change' (TCFD, 2021). By calling for mandatory climate-related financial disclosures based on the TCFD framework, G7 Finance Ministers and Central Bank Governors reinforce 'the need to green the global financial system so that financial decisions take climate considerations into account' (UK Gov., 2021). Next, the International Financial Reporting Standards Foundation (IFRS) pressed the urgency of this matter, requiring entities to disclose information about all sustainability-related risks and opportunities in annual reporting from January 2024 (IFRS, 2023a, 2023b). Thus, consistent with legitimacy theory (Deegan, 2017, 2019; Suchman, 1995) and signaling theory (Seele & Gatti, 2017), the

global financial system is signaling the legitimacy of its role in addressing climate-related sustainability.

With similar urgency, governments and entities are affirming and signaling their legitimate intentions (Seele & Gatti, 2017). For example, Australia and New Zealand recognize climate change as the ‘single greatest existential threat’ to the region, and are committed to working with their Pacific partners to deal with these issues (Ministers Treasury Portfolio, 2023). Both countries have mandated that entities disclose the effects of climate-related sustainability risks as part of their financial statements (CA ANZ, 2024; Ministry for the Environment, 2023). Similarly, entities are signaling legitimate attention to the issue. For example, KPMG’s 2020 survey, which is based on a sample of 5200 large and mid-cap firms around the world, and 250 large global entities, shows that most have targets in place to reduce their emissions: 40% acknowledge the financial risks of climate change in their reporting, and 20% report climate risk in line with the TCFD’s recommendations (Threlfall et al., 2020).

With climate-related risks affecting entities’ revenue, expenditures, assets and liabilities, and financing (CPA Australia, 2023a), society’s expectations are similarly affecting how entities’ legitimacy is perceived (Lawrence et al., 2013; McKinsey, 2022; Whelan et al., 2021) i.e. whether stakeholders perceive entities’ actions are desirable, proper and appropriate within society’s values for climate-related sustainability (Lokuwaduge & Heenetigala, 2017; Suchman, 1995; Tilling, 2004). The importance of legitimacy is evident from reports that ‘business strategy focused on material ESG issues is synonymous with high quality management teams and improved returns’ (Whelan et al., 2021, p. 1). As such, entities may objectively possess legitimacy through the climate-related strategies, responses and reporting they communicate – all aspects where accountants have new and significant roles (Deegan, 2017, 2019).

Similarly accounting firms, particularly Big Four accounting firms, are signaling their commitment by publishing resources that deal with accounting for climate change and the role of accountants. For example, KPMG emphasizes need to understand and manage linkages between financial and environmental performance, with appropriate carbon management strategies (Threlfall et al., 2020). Likewise, Kusche (2020) publishes on Deloitte’s website both: a ‘practical framework concept’ that explains how climate change can be integrated into corporate reporting; and discussion of TCFD’s disclosure recommendations regarding climate change-related governance, strategy, risk management, metrics and targets. Similarly, EY recognizes the key role for the accounting profession in addressing the climate crisis through achieving globally consistent metrics and climate disclosures that are reliable, comparable and relevant (Kummer, 2021).

In response, Australian professional bodies, such as CPA Australia and CA ANZ, joined 11 other global professional accounting bodies in committing to responding to climate change (Accountants Daily, 2021). For example, ACCA (2022)⁹ acknowledges investors’ interest in how climate change can impact entities’ accounting together with how these relate to the International Accounting Standards, particularly the presentation of financial statements, inventory reporting, property, plant and equipment reporting, asset impairment, and the disclosure of liabilities (ACCA, 2022). Relevant to our context are two recently released publications by CPA Australia (2023a, 2023b). One, related to financial reporting, acknowledges how

[t]he swift evolution and unique nature of climate change as a financial issue mean that report preparers and reviewers are required to learn the new language and knowledge of climate risk and integrate this into existing processes to reflect the financial position and performance of the entity (CPA Australia, 2023a).

The other, related to auditing, is purposed ‘to demonstrate how climate should be considered in various phases of the financial statements audit currently in practice by accountancy professionals’ (CPA Australia, 2023b). However, CPA Australia and CA ANZ are yet to reflect these matters in their professional accreditation guidelines that significantly and formally frame tertiary accounting curricula in Australia and New Zealand. For example, of the 11 TCAs and 4 PCAs required for accounting courses to be accredited under CPA Australia’s and CA ANZ’s Professional Accreditation Guidelines, sustainability is referenced only once, quite generally i.e. ‘understand and interpret reports including non-financial data and information such as sustainability reports, integrated reports and extended external reporting’ (CPA Australia & CA ANZ, 2023, TCA 02, LO5). Although the term ‘environment’ is mentioned 16 times, references relate to ‘regulatory environment’ and ‘business environment’.

Accordingly, consistent with human capital theory, investment in education and skills is essential for building the required knowledge base to deliver upon these financial and regulatory requirements (Becker, 1975; Klees, 2016). Here, a range of stakeholders have articulated their expectations for accounting education. First, the United Nations Global Compact established the ‘Globally Responsible Leadership Initiative’ and the ‘Principles of Responsible Management Education’ to generate more responsible business leadership through education (Adams et al., 2011; Gode-mann et al., 2014). Similarly, recent accounting research calls for business education to address the global problems of climate-related sustainability (e.g. Adams et al., 2011; Cottafava et al., 2019; Molthan-Hill et al., 2019). Further, there is evidence of accounting students’ positive support for integrating sustainable business practices into accounting curricula in: Australia (Hazelton & Haigh, 2010); New Zealand (Sharma & Kelly, 2014; Wong et al., 2021); the United Kingdom (Wyness & Dalton, 2018); the United States (Lee et al., 2017); Switzerland (Gatti et al., 2019); and China (Liu et al., 2022).

However, consistent with findings showing a lack of systematic approaches to embedding climate change education into much tertiary curricula (Molthan-Hill et al., 2019), its incorporation into the education of accounting professionals is unclear. For example, interviews with academics and graduates about the integration of sustainability into accounting curricula in New Zealand shows some confusion regarding participants’ strong beliefs that accountants have a role in climate-related sustainability reporting, and their lack of clarity about the details of such roles (Botes et al., 2014). Similarly, whilst Hazelton and Haigh (2010) report a lack of enthusiasm from university administrators and students regarding its incorporation into predominantly technical accounting curricula, recent studies find more favorable attitudes (e.g. Al-Hazaima et al., 2021; Lee et al., 2017; Liu et al., 2022). Other studies report: a globally narrow focus for accounting curricula (e.g. Botes et al., 2014; Boyce et al., 2019; Khan, 2011; Khan & Gray, 2016)¹⁰; and the need for both more awareness about reporting on climate impact, and more contribution from accounting bodies about developing standards focusing on climate change adaptation (e.g. Linnenluecke et al., 2015).

In summary, despite the urgency of the need for accountants to acquire the requisite knowledge and skills for climate-related financial reporting, there is apparent information asymmetry between the business environment (government requirements and entities' obligations), and stakeholders in accounting education. As tertiary education is an important foundation for entry into the accounting workforce (Business Council of Australia, 2017; Noonan et al., 2019), and vital in providing future accountants with the knowledge and skills required for managing and reporting upon entities' obligations regarding climate-related sustainability, it is important to ascertain its current coverage in tertiary accounting education.

Method

First, we identified 43 Australian and 8 New Zealand universities offering undergraduate and/or postgraduate accounting courses accredited by the two accrediting bodies, CPA Australia and CA ANZ. Then, between November 2022 and April 2023, we sought information from their publicly available web pages, regarding the inclusion of climate-related sustainability topics into their accounting courses.

To ensure data reliability, before collecting the information, two authors first agreed upon an approach and applied this as they independently analyzed the randomly selected content of undergraduate and postgraduate accounting courses for 10 universities. With a comparison of their initial findings showing complete agreement, the method was adopted in the data collection phase.

Data was then manually collected. As the content of accounting courses was not publicly available for nine, our final sample comprises 42 universities (36 Australian and 6 New Zealand). After identifying their 82 accounting courses (42 undergraduate and 40 postgraduate), we analyzed the content for all their subjects (and their ILOs). Our scope encompassed all subjects because accounting courses in Australia and New Zealand not only include accounting subjects that cover technical knowledge, but also subjects related to different business disciplines. Boyce et al. (2019) followed a similar data collection approach to investigate the current state of accounting education reform. Thus, our coverage includes (1) core accounting subjects; (2) core business subjects; (3) specialization subjects; and (4) specified electives available. We exclude (1) unspecified elective subjects where students could choose any subject offered by the university; (2) subjects required to complete a second major in a wider undergraduate course (e.g. marketing, economics, finance, etc.); and (3) short courses (see Footnote 6).

This yielded a dataset comprising 1520 subjects (816 accounting subjects and 704 non-accounting subjects) and 7590 ILOs that relate to these subjects (see Table 1). Differences in the number of identified ILOs per university may be attributable to one or more of three factors: (i) the number of subjects offered being relative to the size of the university; (ii) variation in the patterns of subject-level ILOs at different universities; and (iii) cultural differences. In this regard, larger universities can offer more subjects and/or other universities with particular cultures may be more attuned to the issue. For example, in terms of student numbers, University 28 is the largest in Australia (with enrollments $\geq 80,000$ students) and has the highest number of identified subjects (i.e. 30 accounting and 27 non-accounting subjects). In contrast, for University 23 with $\leq 25,000$ student enrollments, 18 accounting and 8 non-accounting subjects were

Table 1. Summary of the identified subjects and ILOs.

University	Jurisdiction	Accounting subjects		Non-accounting subjects	
		Number of subjects	Number of ILOs	Number of subjects	Number of ILOs
University 1	ACT	27	176	11	62
University 2	ACT	18	83	16	70
University 3	NSW	18	88	21	88
University 4	NSW	17	95	18	87
University 5	NSW	35	169	11	55
University 6	NSW	23	109	11	51
University 7	NSW	24	168	23	124
University 8	NSW	14	83	13	75
University 9	NSW	26	153	8	43
University 10	NSW	23	100	14	61
University 11	NSW	19	120	10	50
University 12	NSW	18	90	17	86
University 13	NT	16	76	29	131
University 14	QLD	16	103	16	84
University 15	QLD	21	94	13	56
University 16	QLD	15	67	33	136
University 17	QLD	16	67	20	64
University 18	QLD	16	63	12	59
University 19	QLD	15	59	34	128
University 20	QLD	15	73	17	80
University 21	QLD	15	58	16	69
University 22	SA	19	86	28	158
University 23	SA	18	81	8	35
University 24	TAS	22	82	23	89
University 25	VIC	16	73	23	87
University 26	VIC	15	170	18	203
University 27	VIC	20	91	16	77
University 28	VIC	30	146	27	129
University 29	VIC	23	108	26	136
University 30	VIC	14	64	16	70
University 31	VIC	21	138	12	79
University 32	VIC	16	73	15	72
University 33	WA	24	97	22	93
University 34	WA	16	69	14	56
University 35	WA	19	108	15	71
University 36	WA	27	155	13	72
University 37	NZ	16	67	7	35
University 38	NZ	20	86	17	64
University 39	NZ	15	77	6	35
University 40	NZ	12	77	4	24
University 41	NZ	23	118	14	83
University 42	NZ	23	108	17	95
Total		816	4168	704	3422

identified. Further, there was variation in the median number of ILOs per subject ranging from 11 (University 26) to 4 (University 24).

We analyzed this dataset in two stages. In both stages, we focused on ILOs, as these clearly articulate the specific knowledge and skills that each student is expected to achieve as part of the subject's learning activities. Hence, ILOs should indicate the extent to which climate-related sustainability is embedded in these accounting subjects.

In Stage One, we searched the dataset to identify every instance of the use of the following keywords: 'climate', 'carbon', 'environmental', 'sustainability', 'corporate social responsibility', 'corporate', 'social', 'responsibility', 'CSR', 'environmental, social and governance', 'ESG' as well as 'sustainable', 'societal', and 'environment'. In scanning for keywords, we looked at whether the subjects and their ILOs contribute to developing

accounting students' awareness of climate-related sustainability and its associated reporting, together with their required knowledge and skills.¹¹ In our analysis, we did not include topics such as social conscience about climate change. Next, we manually reviewed the usage of each keyword to determine the context and its relevance to climate-related sustainability. For example, after identifying the keyword 'environment', context and relevance were assessed, as the word is often used to reflect the 'regulatory' rather than 'natural' environment. Consequently, the following ILO is irrelevant:

Explain, discuss and integrate the technical and theoretical knowledge about the regulatory environment relating to Australian corporate accounting and reporting; and apply the relevant concepts to "real" situations. (*MAA716 Financial Accounting, University 25*).

Similarly, we excluded ILOs where the keyword 'sustainability' was related to financial sustainability or business sustainability more generally. For example:

Apply basic financial accounting knowledge to ethically complete the accounting cycle, understand and evaluate business sustainability. (*ACCT2013 Accounting – The Fundamentals of Business, University 33*).

Although Stage One identified ILOs related to climate-related sustainability topics, there was insufficient detail about the extent and nature of these topics and their contextual usage. Accordingly, in Stage Two we conducted more intensive qualitative analysis of these ILOs. In the primary cycle, we explored the context in which the keywords are used in these ILOs to determine the extent and nature of climate-related sustainability topics. Here, using sentence-by-sentence coding, the data was analyzed via two coding cycles to identify patterns (Flick, 2018). Being descriptive in nature, these codes required little interpretation. Next, using the approach adopted by Wilkin et al. (2023), the codes were grouped into larger interpretive categories (Miles et al., 2014; Tracy, 2019) whereby one researcher coded the whole dataset, and another independently coded approximately half. For example, codes such as 'integrated reporting', 'assurance', and 'environmental performance' were grouped as a code-family 'reporting, compliance, and performance measurement'. Results were compared, and inconsistencies examined, with the two coders agreeing upon the recoding of any anomalies.

Findings

Stage one: aggregated findings

Based upon this search of keywords, Stage One provides an initial assessment of the extent to which climate-related sustainability topics are evident in these subjects (and their ILOs) for accounting courses at these 42 universities. Findings appear consistent with the acknowledged constraints on curricula in accounting courses due to accreditation requirements (Aldamen et al., 2021; Birt et al., 2023).

Of the 1520 subjects offered in their 42 undergraduate and 40 postgraduate accounting courses (see Table 1), only 232 subjects (15%) make some reference to climate-related sustainability topics in their ILOs (see Table 2). For 22 universities, this is referenced as part of ≤ 4 subjects; as part of 5–9 subjects for 14 universities; and in ≥ 10 subjects for six. As such, six universities (14%) deliver 77 (33%) of the 232 identified subjects, while 22 universities (52%) offer ≤ 4 subjects referencing these topics.

Table 2. ILOs referencing climate-related sustainability topics.

University	Jurisdiction	Accounting subjects		Non-accounting subjects	
		Number of subjects	Number of ILOs	Number of subjects	Number of ILOs
University 1	ACT	6	11	0	0
University 2	ACT	4	4	0	0
University 3	NSW	8	11	10	12
University 4	NSW	6	6	0	0
University 5	NSW	8	8	2	2
University 6	NSW	4	4	3	3
University 7	NSW	6	14	7	8
University 8	NSW	2	2	1	1
University 9	NSW	5	9	1	1
University 10	NSW	3	3	2	4
University 11	NSW	3	3	0	0
University 12	NSW	0	0	6	9
University 13	NT	1	1	8	19
University 14	QLD	0	0	2	6
University 15	QLD	2	3	0	0
University 16	QLD	2	2	7	15
University 17	QLD	0	0	4	5
University 18	QLD	2	2	3	3
University 19	QLD	0	0	2	4
University 20	QLD	2	2	2	2
University 21	QLD	3	3	4	4
University 22	SA	0	0	2	4
University 23	SA	0	0	1	1
University 24	TAS	11	19	2	2
University 25	VIC	4	5	0	0
University 26	VIC	1	1	7	12
University 27	VIC	1	1	3	6
University 28	VIC	6	18	4	4
University 29	VIC	5	11	4	6
University 30	VIC	1	2	2	2
University 31	VIC	1	1	2	5
University 32	VIC	7	7	6	11
University 33	WA	2	2	1	1
University 34	WA	2	6	3	4
University 35	WA	3	3	1	1
University 36	WA	2	2	1	1
University 37	NZ	0	0	1	2
University 38	NZ	0	0	0	0
University 39	NZ	1	5	0	0
University 40	NZ	1	6	2	2
University 41	NZ	2	2	0	0
University 42	NZ	5	8	4	6
Total		122	187	110	168

Of the 122 accounting subjects, 54 are undergraduate and 68 are postgraduate subjects. This balance is reversed for the 110 non-accounting subjects where 67 are undergraduate and 43 are postgraduate subjects. For undergraduate accounting courses, most (110) are non-accounting subjects rather than accounting subjects (54).

Further, of the total 7590 ILOs, only 355 (4.7%) relate to a climate-related sustainability topic. Of these, 186 ILOs are for undergraduate subjects (85 for accounting and 101 for non-accounting subjects) and 169 ILOs for postgraduate subjects (102 for accounting and 67 for non-accounting subjects).

For undergraduate students, coverage of climate-related sustainability varies according to the year and level of study. Of the 85 ILOs for undergraduate accounting subjects, 15 relate to Year 1 subjects, 23 relate to Year 2 subjects, and 47 to Year 3 subjects.

Table 3. Universities with accounting subjects primarily focusing on reporting climate-related sustainability.

University	Identified accounting subjects
University 1	BUSN3017 Corporate Social Responsibility, Accountability and Reporting (<i>Bachelor of Accounting</i>); BUSN7017 Sustainability and Corporate Social Responsibility, Accountability and Reporting (<i>Master of Accounting</i>)
University 7	ACCT3625 ESG Reporting and Enterprise Value (<i>Bachelor of Commerce</i>); ACCT5961 Reporting for Climate Change and Sustainability (<i>Master of Professional Accounting</i>)
University 9	ACCT3016 Sustainability Management and Reporting (<i>Bachelor of Commerce</i>)
University 24	BFA759 Managing and Reporting Sustainability-Related Performance, BFA760 Sustainability-Related Governance and Assurance, BFA757 Socially Responsible Investing, BFA758 Organizational Social Responsibilities (<i>Master of Professional Accounting</i>)
University 28	ACX2900 Accounting for Sustainability, ACX3800 Accounting for Climate Change ACX5900 Accounting for Sustainability, ACX5800 Accounting for Climate Change (<i>Master of Professional Accounting</i>)
University 29	ACCT2333 Sustainability Reporting, Accounting and Socially Responsible Entities ACCT2229 Accounting for Sustainable Management (<i>Master of Professional Accounting</i>)
University 34	ACC6035 Contemporary Issues in Sustainability Accounting (<i>Master of Professional Accounting</i>)
University 39	ACCT340 Social and Environmental Reporting (<i>Bachelor of Commerce</i>)
University 40	ACCT325 Corporate Sustainability Accounting and Reporting (<i>Bachelor of Commerce</i>)
University 42	MMPA517 Special Topic: Sustainability and Accountability (<i>Master of Professional Accounting</i>)

Conversely, in non-accounting undergraduate subjects, climate-related sustainability topics are covered more in Year 1: 74 ILOs relate to Year 1 subjects; 17 ILOs relate to Year 2 subjects; and 10 ILOs relate to Year 3 subjects. In postgraduate subjects, of the 102 ILOs for accounting subjects, 28 relate to Year 1 subjects, while 74 relate to Year 2 subjects. A similar variation is evident in non-accounting postgraduate subjects, with 22 ILOs relating to Year 1 subjects and 45 ILOs to Year 2 subjects.

Further analysis of these ILOs shows variation between universities. For example, the number of ILOs for accounting subjects shows minimal focus on this topic at some universities e.g. University 38 (0), University 23 (1), University 41 (2). Others have a stronger focus e.g. University 3 (23), University 7 (22), University 28 (22). Thus, of the 355 ILOs related to climate-related sustainability topics, analysis shows ≤ 4 ILOs at 15 universities, 5–9 ILOs at 13 universities, and ≥ 10 ILOs at 14 universities. As such, 14 universities (38%) have 228 (64%) of the 355 identified ILOs.

More specific coverage of climate-related sustainability in accounting subjects is apparent at 10 universities (see [Table 3](#) below).

For non-accounting subjects, climate-related sustainability is typically addressed in business environment contexts, i.e. ethical and strategic perspectives about business responsibilities for environmental and social wellbeing (see [Table 4](#) below). For example, University 3 offers the subject ‘Strategic Management for Sustainability’. Similarly, in its Bachelor of Accounting course, University 10 offers ‘Business and Social Impact’, which aims to develop students as future business leaders who will create businesses that deliver positive social and environmental change.

Analysis of the 187 ILOs from accounting subjects (see [Tables 2](#) and [5](#)) shows that most relate to specialized sustainability and corporate social responsibility accounting subjects (77); financial accounting subjects (35); and management accounting subjects (30).

Analysis of the 168 ILOs from non-accounting subjects (see [Table 6](#) below) shows that most relate to specialized subjects, such as sustainability (53) and business and society (30). This focus is less evident for non-accounting subjects related to management, marketing, finance and economics.

Table 4. Universities with non-accounting subjects primarily focusing on climate-related sustainability.

University	Identified non-accounting subjects
University 3	MGMT605 Strategic Management for Sustainability (<i>Master of Professional Accounting</i>)
University 10	21214 Business and Social Impact (<i>Bachelor of Accounting</i>)
University 12	BUS101 Principles of Responsible Business (<i>Bachelor of Business – Accountancy</i>)
University 13	ECOS05 Economics of Sustainability, BUS504 Sustainable Enterprise, BUS505 Design Thinking for Sustainable Innovation, BUS507 Global Market and Sustainable Strategy, ENT501 Sustainable Entrepreneurship (<i>Master of Professional Accounting – Professional Practice</i>)
University 14	BUSN12-200 Responsible and Sustainable Organizations (<i>Bachelor of Commerce</i>); BUSN71-200 Responsible and Sustainable Organizations (<i>Master of Accounting</i>)
University 16	1004GBS The Purpose of Business, 1982MED Sustainability and Health, 1043SCG Introduction to Environmental Sustainability (<i>Bachelor of Business – Accounting</i>)
University 17	LB5229 Economics for a Sustainable World (<i>Master of Professional Accounting</i>)
University 19	SOCI1004 Applied Ethics and Sustainability (<i>Bachelor of Business – Accounting</i>)
University 22	BUSN1024 Transforming Business Towards Net Zero (<i>Bachelor of Accounting</i>); BUSN8007 Ethics, Sustainability and Governance (<i>Master of Accounting</i>)
University 26	BUGEN5930 Business Society and the Planet (<i>Master of Professional Accounting</i>)
University 27	BUS15BY Sustainability (<i>Bachelor of Accounting</i>)
University 29	BUSM2572 Business in Society (<i>Bachelor of Accounting</i>)
University 30	BUS30031 Sustainable Business Practice (<i>Bachelor of Accounting</i>)
University 31	CMCE10001 Sustainable Commerce (<i>Bachelor of Commerce – Accounting</i>)
University 32	BSK1001 Ethics and Sustainability (<i>Bachelor of Business – Accounting</i>); BMO5501 Business Ethics and Sustainability (<i>Master of Professional Accounting</i>)
University 37	BUSS509 Ethics, Responsibility and Sustainability (<i>Bachelor of Business – Accounting</i>)

Table 5. Accounting subjects with climate-related sustainability topics in their ILOs.

Stream	Number of ILOs	Percentages
Sustainability and Corporate Social Responsibility	77	42.11%
Financial Accounting	35	18.42%
Management Accounting	30	15.79%
Introductory Accounting	15	7.89%
Accounting Theory & Issues in Accounting	14	7.37%
Ethics and Governance	6	3.16%
Auditing	4	2.11%
Accounting Capstone	2	1.05%
Accounting Data Analytics	2	1.05%
Accounting Information Systems	1	0.53%
Taxation	1	0.53%
Total	187	100%

Table 6. Non-accounting subjects with climate-related sustainability topics in their ILOs.

Stream	Number of ILOs	Percentages
Sustainability	53	31.55%
Business and Society	30	17.86%
Management	15	8.93%
Economics	14	8.33%
Finance	12	7.14%
Business Law	11	6.55%
Business Ethics and Governance	8	4.76%
Business Analytics and Information Systems	6	3.57%
Other	5	2.98%
Work Integrated Learning	4	2.38%
Marketing	3	1.79%
Social Policy	3	1.79%
Business Capstone	2	1.19%
Statistics	2	1.19%
Total	168	100%

Stage two: qualitative analysis of the ILOs for accounting subjects

In Stage Two, to understand the particular orientation being adopted in the 122 identified accounting subjects, we analyzed the contextual usage of keywords in their 187 ILOs. Findings show a focus on one or more of five themes, namely: reporting, compliance, and performance measurement; development of non-financial corporate accounting and the changing role of accountants; sustainable development; corporate social responsibility; and challenges of sustainability (see [Table 7](#) below).

Reporting, compliance, and performance measurement

Of the total 187 ILOs for accounting subjects, 91 relate to reporting, compliance, and performance measurement. Of these, 50 ILOs are for undergraduate and 41 for postgraduate subjects (see [Table 7](#)).

The term 'sustainability' typically aligns with reporting or disclosure. For example, in financial accounting subjects, the ILOs are related to analyzing and interpreting sustainability reports. The focus includes references to 'triple bottom line reporting', 'ESG', or 'integrated reporting' rather than evaluation of reporting frameworks. An exception is 'Critically evaluate the most common reporting frameworks used by organizations to report the sustainability implications of their operations' (ACX2900 Accounting for Sustainability, University 28).

A limited number of auditing-specific ILOs explicitly cover sustainability i.e. *ACG510 Risk Based Auditing*, University 4. There is evidence of a technical focus in management accounting subjects (i.e. *ACCG8308 Strategic Management Accounting*, University 5), where sustainability appears primarily concerned with strategic decision-making or performance measurement.

Development of non-financial corporate accounting and the changing role of accountants

Of these 31 ILOs, 'sustainability accounting' or 'integrated reporting', and its subsequent effects on accountants' roles, are referenced in 11 ILOs for undergraduate and 20 postgraduate subjects. Typically they concern the implications of sustainability for accounting practice. Primary foci concern: the development of non-financial reporting frameworks; commencement of a holistic framework to support cohesive reporting of social, environmental and financial impacts; and meeting the mandatory requirements related to creating a sustainable society. As such, they suggest some focus on harmonizing sustainability accounting standards in the same manner as the unification of international financial accounting standards i.e. to bring clarity, understandability and comparability in reporting.

These themes are evident in subjects such as *ACC80020 Contemporary Issues in Accounting and Research* (University 30) and *MBS679 Accounting Theory and Governance* (University 35). For example:

Assess the implications of recent developments in external reporting in respect of both business and the wider context of society (including harmonization and corporate social responsibility). (*ACCY308 External Reporting and Accountability*, University 42).

Surprisingly, only 16 ILOs refer to how the role of accountants may change as part of reporting climate-related sustainability. Of these 16 ILOs, six are in undergraduate and

Table 7. Themes evident from the contextual use of the keywords.

Key themes	Number (%) of the total 187 ILOs	Examples
Reporting, compliance, and performance measurement	91 (48.66%)	<p>Use analytical and research skills to apply, investigate and analyze complex accounting issues relating to elements of financial statements including social and environmental reporting. (<i>ACCT20071 Foundations in Accounting, University 15</i>)</p> <p>Interpret reports including financial and non-financial data and information such as sustainability reports, integrated reports and extended external reporting. (<i>11767.1 Advanced Issues in Accounting, University 2</i>)</p> <p>Formulate ethical strategic and corporate social responsibility related performance measurement and controls systems within an entity and for the benefit of society generally. (<i>ACCG8308 Strategic Management Accounting, University 5</i>)</p> <p>Be able to discuss the role of the audit professional in diverse audit teams involved in assurance of sustainability and other non-financial reports. (<i>ACG510 Risk Based Auditing, University 4</i>)</p>
Development of non-financial corporate accounting and the changing role of accountants	31 (16.58%)	<p>Critically evaluate the development and contemporary use of financial reporting on climate change and sustainable development issues. (<i>ACC80020 Contemporary Issues in Accounting and Research, University 30</i>)</p> <p>Debate future directions in accounting including social and environmental reporting, and international financial reporting standards. (<i>MBS679 Accounting Theory and Governance, University 35</i>)</p> <p>Discuss the changing role of Accountants with respect to reporting on issues such as ICT (information, communication & technologies) and sustainability. (<i>ACCT5432 Introductory Financial Accounting, University 36</i>)</p> <p>Articulate the importance of ethical professional values of managerial accountants and appraise how they can impact organizational corporate social responsibility. (<i>ACCT604 Managerial Accounting, University 3</i>)</p>
Sustainable development	28 (14.97%)	<p>Critically evaluate the role of accounting and accountability for the sustainable development of organizations. (<i>BAO5535 Issues in Contemporary Accounting, University 32</i>)</p> <p>Hypothesise sustainable accounting solution(s) to an accounting research problem in a large-scale organization. (<i>BFA715 Contemporary Accounting Perspectives, University 24</i>)</p> <p>Apply local and international codes of ethics for professional accounting in addressing business issues to inform responsible and sustainable decision-making. (<i>MAA262 Management Accounting, University 25</i>)</p>
Corporate social responsibility (CSR)	25 (13.37%)	<p>Explain the importance of accounting and its role in decision-making by various users and understand the importance of corporate social responsibility in the context of the common good, the environment and society. (<i>BUSN104 Money Matters, University 3</i>)</p> <p>Demonstrate knowledge of the theory and practice of the management accounting discipline with some depth and the ability to recognize, reflect on, and respond appropriately to ethical, social or</p>

(Continued)

Table 7. Continued.

Key themes	Number (%) of the total 187 ILOs	Examples
Challenges of sustainability*	12 (6.42%)	<p>environmental issues influencing the practice of business, at a fundamental level. (<i>AFM112 Introduction to Management Accounting, University 6</i>)</p> <p>Form and articulate an opinion on emerging social, environmental, ethical, regulatory, political and technological aspects relevant to an accounting practitioner. (<i>ACCG8150 Contemporary Accounting Practice, University 5</i>)</p> <p>Critique the risks and opportunities that the sustainability agenda creates for investors and lenders. (<i>BFA757 Socially Responsible Investing, University 24</i>)</p> <p>Adapt your approach to the application of management accounting decision facilitation techniques to deal with ambiguous, highly complex organizational challenges embedded in socially and environmentally constrained contexts. (<i>ACCT6006 Advanced Managerial Accounting, University 9</i>)</p>

*Note that subjects and ILOs were excluded where 'sustainability' refers to financial sustainability or business sustainability more generally.

10 in postgraduate subjects. Examples include *ACCT5432 Introductory Financial Accounting* (University 36); and *ACCT604 Managerial Accounting* (University 3). For example, one ILO recognizes accountants' role in sustainability reporting, by highlighting the importance of developing integrated thinking as:

Develop awareness of ethical, environmental and sustainability considerations in integrated reporting and integrated thinking. (*ACCT5925 ESG Reporting and Enterprise Value Creation, University 7*).

Sustainable development

The focus in these 28 ILOs (eight in undergraduate and 20 in postgraduate subjects) mainly concerns the role of accounting and accountability in an entity's sustainable development and sustainable decision-making.

With a few exceptions, the topic is typically covered via a business-centric or entity-centric approach e.g. *BAO5535 Issues in Contemporary Accounting* (University 32) and *BFA715 Contemporary Accounting Perspectives* (University 24). References to the role of accounting, accountability and professional ethics in achieving sustainable development appear dependent upon discipline perspectives (financial accounting or management accounting). In a few instances, an ILO focuses on sustainability more holistically by requiring consideration of long-term social impacts. For example:

Analyze the socio-economic context and roles of corporations in the context of sustainability and social justice. (*BUSN3017 Corporate Social Responsibility, Accountability and Reporting, University 1*).

Corporate social responsibility (CSR)

In the 25 ILOs concerned with CSR, there is evidence of broadening the scope of accounting from technical practice to include social and environmental perspectives when decision-making. Here 11 ILOs relate to undergraduate and 14 to postgraduate

subjects. The term ‘social’ is most frequently associated with the importance of CSR, including environmental issues that influence corporate practices.

Overall, these ILOs are consistent with a holistic perspective for accounting i.e. a coexistence of economic and social development that simultaneously creates value for an entity and for society more generally. For example, *BUSN104 Money Matters* (University 3) explores ‘*the importance of corporate social responsibility in the context of the common good, the environment and society.*’ Similarly, *AFM112 Introduction to Management Accounting* (University 6) focuses on management accountants’ ‘ability to recognize, reflect on, and respond appropriately to ethical, social or environmental issues.’ As such, these ILOs are evident in a range of accounting subjects, including accounting theory and issues in accounting, an accounting capstone, financial accounting, ethics and governance, introductory accounting, and management accounting.

Interestingly, use of the term ‘social’ or ‘societal’ in some ILOs suggests that simultaneous achievement of social, economic and environmental progress is unproblematic. In this regard, the economic efficiency of an entity appears to be compatible with social and environmental performance, which prior literature regards as a weak form of sustainability (i.e. Bebbington & Thomson, 1996). For example:

Propose appropriate management accounting technologies to effectively and efficiently manage suppliers, customers, time, capacity, costs and support organizational strategies, in consideration of an organization’s environmental and sustainability commitment(s) and impact. (*ACCG3001 Organizational Planning and Control, University 5*).

Challenges related to sustainability

A small number of ILOs (12) allude to the conflict between economic growth and the natural environment, together with the challenges that a sustainability agenda creates for capitalism: five ILOs relate to undergraduate and seven to postgraduate subjects. There are three instances where tensions between financial, social, and environmental performance are explicitly highlighted (see [Table 7](#)). For example:

Interpret and analyze a range of accountability approaches and the implications of financial performance (measured in terms of cash flows; income statement and balance sheet performance) on social and environmental performance. (*ACCT1046 Accounting in Organizations and Society, University 29*).

Summary of stage one and stage two findings

Analysis shows variation between universities, with a significant number of universities having a minimal focus and/or a targeted approach to integrating climate-related sustainability in accounting subjects (see [Table 8](#)). A few universities have made significant endeavors in this regard, i.e. six offer ≥ 10 subjects and for three, these subjects comprise $\geq 41\%$ of their accounting curricula offerings. However, this is atypical, as nine universities offer ≤ 2 subjects, while 13 universities offer ≤ 4 subjects. As a percentage of total subjects in accounting courses (i.e. accounting and non-accounting subjects), climate-related sustainability topics are evident for $\leq 10\%$ of these subjects at 15 universities, and 11–20% at 19 universities.

Table 8. Evidence of climate-related sustainability in the accounting courses at the 42 Australian and New Zealand universities.

Subjects or ILOs where climate-related sustainability is evident	0–2	3–4	5–7	8–9	≥ 10	Total no. of universities
No. of universities with climate-related sustainability subjects	9	13	9	5	6	42
No. of universities with climate-related sustainability ILOs	4	11	11	2	14	42
Climate-related sustainability subjects as the % of subjects	0–10%	11–20%	21–30%	31–40%	≥ 41%	Total no. of universities
No. of climate-related sustainability subjects as a % of the total no. of accounting subjects	19	12	7	1	3	42
No. of climate-related sustainability subjects as a % of the total no. of non-accounting subjects	16	13	8	3	1	42
No. of climate-related sustainability subjects as a % of the total no. of accounting and non-accounting subjects	15	19	6	0	1	42

Assessing the extent to which these topics are integrated in these subjects is difficult. However, tellingly there are only 355 ILOs for a total of 232 subjects. Further 228 ILOs (64%) relate to subjects at 14 universities (38%). Of the 34 universities with *accounting* subjects that reference climate-related sustainability topics, 19 average 1 ILO per subject. Similarly, of the 33 universities that offer *non-accounting* subjects with these topics, 15 average 1 ILO per subject. This would suggest that climate-related sustainability is addressed in accounting curricula by adjusting existing subjects rather than creating ones to specifically address the required knowledge and skills.

Discussion and conclusion

Incorporating climate-related sustainability into accounting curricula is a complex task related to addressing: the societal expectations for a more balanced, ethical, sustainable world (Kurucz et al., 2014; Lawrence et al., 2013; McKinsey, 2022); and the technical skills required for risk assessment, capital allocation and strategic planning (IFRS, 2023d; TCFD, 2021). In this context, the urgency for accounting curricula to incorporate this required knowledge and skills is increasing, as entities have new obligations regarding their financial statements (IFRS, 2023a, 2023b). Specifically, from January 2024, accountants have roles that relate to two IFRS standards, which require entities to disclose information in their financial statements regarding governance processes, controls, and strategies for managing climate-related risks and opportunities (IFRS, 2023a, 2023b, 2023d; TCFD, 2021).

Our investigation shows some response to these societal and regulative influences (Kummer, 2021; McKinsey, 2022) as climate-related sustainability is apparent in accounting courses for all but one of the 42 Australia and New Zealand universities in our sample. However, this coverage is inconsistent. For example, six universities (14%) deliver 77 (33%) of the 232 identified subjects, with inclusion in ≤4 subjects at 22 universities. When linked with findings showing that one climate-related sustainability ILO per subject at many of these universities, integration is seemingly achieved by adaptations to existing units. Indeed, with the exception of 91 ILOs related to ‘reporting, compliance and performance measurement’, it would seem that the focus is more on knowledge than developing skills.

Thus, findings indicate more needs to be achieved to ensure the requisite human capacity such that accountants have the productive capacity and skills for roles concerned with climate-related sustainability reporting (Becker, 1975; Klees, 2016). In this context, it is widely acknowledged as difficult to balance adjustments to accounting curricula with the accreditation requirements, i.e. in the UK (Ellington, 2017; Ellington & Williams, 2017) and Australia (Ozdil et al., 2023). As such, we offer some practical strategies for accounting educators by focusing on: adaptations to existing subjects; using external resources to motivate students; and collaborative engagement.

Adaptations to existing subjects

For financial and management accounting subjects to develop students' requisite knowledge and skills, existing topics may be adjusted to include financial implications of the impacts of climate change on asset impairment and the useful life of assets, together with liabilities such as supply chain risks. This would develop accounting students' holistic perspectives for analyzing and mitigating these risks, together with some required skills for reporting and advising entities on risk assessment and mitigation. Other adjustments may include: analysis to evaluate likelihood of adverse events and their impact on business operations under varied climate change scenarios; estimating provisions for potential risks resulting from climate impacts; and adopting supply chain analysis to understand flow-on effects from entity's suppliers. Similarly, rather than focusing on accounting practices that typically rely on labor or machine hours as limiting factors, businesses' greenhouse gas emissions or water usage could be considered.

More extensive curriculum adjustments could include role-playing activities and field experiences. For example, field visits are useful for cultivating accounting students' ethical sensitivity (Dellaportas & Hassall, 2013). Similarly, experiential learning is shown as a valuable means of acquiring technical skills and knowledge, as well as improving attitude and real-world awareness (Gittings et al., 2020). By covering specific technical skills in elective or specialized subjects, the needs of a more limited number of students may be addressed. These subjects could pilot new material that may later be 'translated' into more mainstream accounting subjects.

Using external resources to motivate students

Beyond the classroom, students' knowledge and expertise may be developed by national and international student competitions that require them to consider climate-related issues in an accounting context. Examples of such initiatives include the Student Writing Competition (PRME Chapter UK & Ireland, 2023) and the Accounting for Sustainability International Case Competition (Global Business School Network, 2023).

Collaborative engagement

This strategy focuses on achieving either more consistency between universities' accounting courses and/or more inclusion of climate-related sustainability in accreditation guidelines. While the relevant professional bodies for Australia and New Zealand have publicly

expressed their commitment to accountants' roles for climate mitigation (CA ANZ, 2024; CPA, 2023a, 2023b), they are yet to adjust their TCAs and PCAs to reflect this commitment. In this context, there is value in accounting educators who are currently integrating climate-related sustainability into their subjects to collate and share their knowledge. Using this knowledge, they could offer workable suggestions to these professional bodies. Such proposals should include their experiences about important themes, and coverage of skills as well as content (knowledge), together with how this is/should be weighted in undergraduate and postgraduate courses. Wider coverage may be gained by promulgating their shared knowledge via conference presentations and published papers.

In reporting our findings, we acknowledge several limitations, particularly: our Australian and New Zealand context; and the validity of results being dependent upon the accuracy of publicly available information on universities' websites. These indicate avenues for future research, including: comparative studies in other countries; the use of methodologies such as interviews or surveys to investigate factors affecting integration of climate-related sustainability into accounting curricula; and/or interrogation of the assessment tasks to assess coverage of technical skills. Similarly, once the professional bodies include guidance on the coverage of climate-related sustainability in their TCAs and PCAs, there is merit in qualitatively mapping this in undergraduate and postgraduate programs, including across year levels. Additionally, research could explore the influence of university size and culture upon the emphasis afforded to coverage of climate-related sustainability.

In summary, this study adds urgency to calls for reforming accounting education to accommodate more focus on accountants' roles for climate-related sustainability (e.g. Boyce et al., 2019; Boyce & Greer, 2013; Gray, 2015, 2019). Here, the global financial system has signaled the legitimacy of its role in addressing the matter. In signaling their commitment, Australian professional bodies, such as CPA Australia and CA ANZ, certainly acknowledge the significant impact of climate-related sustainability reporting on accounting practice and accountants' roles (i.e. CPA Australia, 2023a, 2023b). However, given the acknowledged constraints upon accounting curricula (Aldamen et al., 2021; Birt et al., 2023; Ellington, 2017; Ellington & Williams, 2017), achieving more significant responses will be certainly advantaged when these bodies translate this into their professional accreditation guidelines. In this context, while the focus appears less than consistent, and limited more to acquiring knowledge than skills, our study demonstrates some legitimate efforts to broaden tertiary accounting education in Australia and New Zealand to accommodate accountants' new roles required to support entities' obligations regarding climate-related sustainability.

Notes

1. IFRS S1 *General Requirements for Disclosure of Sustainability Related Financial Information* includes requirements that focus on disclosing sustainability-related risks and opportunities with the potential to reasonably affect the cash flows and access to finance or cost of capital (IFRS, 2023a). IFRS S2 *Climate Related Disclosures* requires entities to disclose information about climate-related risks and opportunities that could reasonably affect their cash flows and access to finance and their strategy for monitoring and managing climate-related risks and opportunities (IFRS, 2023b).

2. We define entities as those organizations and companies that must submit financial statements in accordance with IFRS. This includes (1) public interest entities – banks, insurance companies (except health), asset management companies, stock exchange and their branches; and (2) a trading company that has at least two consecutive accounting periods.
3. CA ANZ is the acronym for Chartered Accountants Australia and New Zealand.
4. Nine universities (six Australian and three New Zealand) are excluded as data was unavailable from their webpages.
5. Completion of an accredited course provides a pathway for students to advance towards provisional membership and thus progress to become a fully qualified accountant.
6. Subject (also referred to as a unit) is a 12 to 13-week module, comprised of between 6 and 12.5 credit points in Australia, and 15 credit points in New Zealand. Typically, a full-time student enrolls in four subjects per semester, accumulating between 24 and 50 credit points per semester towards their degree in Australia, and 60 credit points per semester towards their degree in New Zealand.
7. We exclude short courses, such as diplomas and graduate certificates, as these often comprise a subset of subjects that are part of higher degree courses and moreover offer an alternative exit for students. For example, at University 29, completion of the first four subjects in the Master of Professional Accounting is equivalent to a Graduate Certificate in Professional Accounting.
8. The international body that monitors and makes recommendations about the global financial system.
9. ACCA has an office in Sydney and provides exemptions from completion of relevant degrees in Australia and New Zealand.
10. In the context of this study, a recent study of the accounting curriculum in 31 Australian and 8 New Zealand universities reports very few examples of systematic curricular-wide change to the traditional technical and vocational nature of accounting education (Boyce et al., 2019).
11. The terms CSR (Corporate Social Responsibility) and ESG (Environment Social Governance) are typically linked with climate-related sustainability. Consistent with our purpose, our social factor is not about developing accounting students' social conscience about climate change. Rather our analysis focusses on detailing evidence about how accounting education currently develops: (1) understanding about requirements for reporting climate-related sustainability; and (2) the knowledge that accounting students require.

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