

# Integrated Thinking to Address Social and Environmental Grand Challenges

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**Purpose** – This paper addresses the urgent need for new approaches and systems of accountability to tackle grand challenges such as climate change, resource scarcity, and inequalities. It explores the role of accounting and accountability practices, as well as the actions of academics, through the lens of Integrated Thinking.

**Design/methodology/approach** – The paper employs the three-stage critical framework of Alvesson & Deetz (2000), which includes insight, critique, and transformative redefinition. It reviews the current literature on grand challenges and Integrated Thinking, extending the conceptual framework proposed by Granà *et al.* (2025). It critically reflects on the contributions to this AAAJ Special Issue in the context of Integrated Thinking, suggesting future research directions and actions.

**Findings** – The study highlights the potential of Integrated Thinking to improve connectivity and collaboration across organisational, societal and intertemporal boundaries to drive meaningful change in addressing grand challenges. It emphasises the importance of considering multiple perspectives and integrating various domains of knowledge to make informed decisions that prioritise the whole over its constituent parts. The study proposes that Integrated Thinking may help in developing a virtuous 'loop' across organisational, disciplinary and contextual boundaries.

**Originality/value** – This paper extends the framework proposed by Granà *et al.* (2025) to incorporate Integrated Thinking, offering a new perspective on how accounting and accountability practices can address grand challenges. The paper provides a call to action for accounting academics, proposing future research directions and reflections to promote Integrated Thinking across research, teaching, and service activities.

**Keywords** Integrated Thinking, Connectivity, Accounting, Accountability, Grand challenges

**Paper type** Research paper

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## 1. Introduction

Grand challenges are systemic and intertemporal global problems such as climate change, resource scarcity, and inequalities (Granà *et al.*, 2025). These grand challenges have become tangible realities, and the need for new approaches and systems of accountability to address them has become urgent. Quick or simple fixes cannot address grand challenges; robust actions to respond to them require collaboration, connection, coordination and fundamental transformation (Ferraro *et al.*, 2015; George *et al.*, 2016). This AAAJ Special Issue focuses on the role of accounting and accountability in addressing grand challenges. Accounting as a discipline is central to understanding and influencing how organisations interpret and respond to social and environmental problems (Bebbington and Unerman, 2018; Guthrie and Dumay, 2021), as accounting can significantly impact how social and environmental sustainability is practised and evaluated (Busco, 2022).

Granà *et al.* (2025) introduce an integrated accounting and accountability approach that links questions of "why, what, how, and where/when" in a continuous loop to drive organisations towards achieving more significant change. In this paper, we focus on the nature of this continuous loop. Such a loop needs to be able to connect problems and challenges not only within organisations but also across disciplines, time and space for multiple, often competing, stakeholders. Alawattage *et al.* (2021) emphasise the need to study connections between actions, decisions and responsibilities when developing solutions to grand challenges. Bebbington *et al.* (2020) also stress the importance of considering accounting's impact beyond its traditional organisational boundaries. We propose that this continuous loop represents a way of thinking, and that conceptualising this loop as Integrated Thinking may help both organisations and individuals drive meaningful change towards addressing social and environmental grand challenges.

Integrated Thinking involves considering multiple perspectives and integrating various domains of knowledge—financial, social, and environmental—to make informed decisions that account for the past, present, and future. Integrated Thinking's holistic approach, which is similar to systems thinking, emphasises the importance of the whole over its individual parts, promoting a comprehensive view of accountability that includes broader social and environmental concerns (Checkland, 1981; Dimes and De Villiers, 2024). Integrated Thinking is the management philosophy associated with Integrated Reporting, which encourages organisations to report on value creation, maintenance, and destruction over time across six capitals: financial, human, natural, social, intellectual, and manufactured (IIRC, 2013). This type of thinking necessitates balancing actions and making trade-offs among these capitals, and facing the tensions that will naturally arise during this process (Oliver, Vesty and Brooks, 2016). While some view Integrated Thinking as somewhat idealistic (Gibassier, Rodrigue and Arjaliès, 2018; La Torre *et al.*, 2018), others see it as an ongoing journey of learning (Massingham *et al.*, 2019), one that requires leadership commitment, stakeholder engagement, a culture of trust and collaboration, and robust new information systems to drive positive change and innovation (Dimes and De Villiers, 2024).

In this paper, we introduce and reflect on the many contributions to this AAAJ special issue using the lens of Integrated Thinking. We consider how Integrated Thinking can help both organisations and individuals to focus on the whole, rather than constituent parts, in their efforts to bring about change. In addition, we focus on the actions taken by accounting academics, specifically the research methods they employ, how these lead to impact, and the changes they can encourage at an institutional level to help find solutions to grand challenges. We propose future research avenues based on Integrated Thinking and actions for academics to adopt, promoting a more holistic approach to their research, teaching, and service activities.

This study contributes to the accounting literature on social and environmental grand challenges by extending the framework proposed by Granà *et al.* (2025) to incorporate the notion of Integrated Thinking. We suggest that new models of integrative and intergenerational accountability need to be accompanied by shifts in thinking. We introduce and reflect on the contributions to this Special Issue in light of Integrated Thinking and to the broader literature on Grand Challenges. We highlight the potential for a different way of thinking to improve connectivity and reduce tensions when addressing grand challenges, following calls for improvements in collaboration, connection, and coordination by Ferraro *et al.* (2015) and George *et al.* (2016). . The majority of the literature on Integrated Thinking considers its relevance and application at an organisational level (Dimes and De Villiers, 2024), whereas we extend this literature by considering its application at a broader societal and systemic level when addressing grand challenges. In addition, we provide a call to action for accounting academics by offering future research directions and highlighting institutional challenges that can be addressed through Integrated Thinking. Our research supports calls from Ballantine *et al.* (2024) and Parker (2011) for universities to adapt their research, teaching and impact to reflect the urgent realities of the world we now inhabit.

The paper is structured according to the three-stage critical framework proposed by Alvesson and Deetz (2000). The Alvesson and Deetz framework offers a comprehensive, multi-dimensional lens for approaching critical analysis. The framework has three stages: insight, critique, and transformative redefinition. The first stage, 'insight', requires a detailed investigation of the phenomena of interest. At this stage, we review the current literature on grand challenges and Integrated Thinking and propose an extension to the Granà *et al.* (2025) conceptual framework that incorporates Integrated Thinking. The second stage of the Alvesson and Deetz framework is 'critique'. In Section 3 of the paper, we introduce the latest contributions from accounting academics to this Special Issue on the topic of grand challenges,

critically reflecting on them in the context of Integrated Thinking. The third stage of the Alvesson and Deetz framework, 'transformative redefinition,' highlights the need for a 'call to action.' In this stage, presented in Section 4, we consider Integrated Thinking as it applies to academic research on accounting and accountability and propose both future research directions and actions for accounting academics. We conclude in Section 5.

## **2. Insight**

### *2.1 Grand challenges*

Grand challenges are phenomena that defy the boundaries of disciplines, organisational forms, geopolitical arenas and time (George *et al.*, 2016). They are complex, uncertain, and ambiguous (Ferraro *et al.*, 2015), and solving them requires global cooperation, innovation, and transformation. Addressing such complex challenges requires working, negotiating and influencing in an environment of uncertainty across both time and space (Granà *et al.*, 2025). Although these challenges may have arisen as a result of past actions, they necessitate decisions in the present that have consequences for the future (Campbell *et al.*, 2019). So far, organisations have proven incapable of integrating social and environmental grand challenges into their present-day decision-making, a form of procrastination that only serves to exacerbate the problem (Tregidga and Laine, 2022).

The question of whether accounting either contributes to global grand challenges or can provide solutions to them (or both, or neither) is one of considerable research interest (see Alawattage *et al.*, 2021; Bebbington *et al.*, 2020; Tregidga and Laine, 2022). Traditional accounting and calculative practices struggle to conceptualise broad multivocal challenges (Arjalies and Gibassier, 2023; Cuckston, 2019; Vollmer, 2021). If accounting and accounting-related research aims to play a role in addressing these challenges, it must become more forward-looking and tolerant of change and uncertainty (Granà *et al.*, 2025). Even if it does, academic

accounting research still struggles to have a significant impact on accounting practice (Parker *et al.*, 2011; Pimentel *et al.*, 2023).

## *2.2 Integrated Thinking*

Integrated Thinking refers to the process of considering multiple perspectives and integrating different domains of knowledge (financial, social and environmental) to make more informed decisions that take into account the past, present and future. We refer to Integrated Thinking as a noun throughout our paper, rather than using the verb form (integrated thinking). The noun form refers to the process of considering and integrating different perspectives, and it is this process of connectivity that we are focused on in this paper. The level and nature of connectivity has always underpinned organisations and society (Kolb, Caza and Collins, 2012), and refers to humans sharing information and resources. Integrated Thinking, like systems thinking, is a holistic rather than a reductionist approach that focuses on the whole being more important than its constituent parts (Hurth, 2017; Jackson, 2013; Oliver *et al.*, 2016; Williams *et al.*, 2017), making connectivity a critical feature. In an accounting setting, this concept is helpful because, rather than focusing on individual elements that contribute to a whole, it focuses on the properties of the whole (Checkland, 1981). This should promote a more holistic view of accountability, encouraging the incorporation of broader social and environmental concerns (Gray, 1992). Integrated Thinking can be thought of as a type of management (Knauer and Serafeim, 2014; Vesty *et al.*, 2018) that "unites the constituent parts of an organisation and focuses the whole organisation on value creation for the enterprise and its key stakeholders" (IFAC, 2022, p1). Although the International Federation of Accounting (IFAC) describes Integrated Thinking as a new business philosophy, the notion of changing management mindsets to incorporate broader social and environmental perspectives has been practised and researched for decades (Cyert and March, 1963; Freeman & Reed, 1983; Thompson, 1967) as has the tension involved in balancing competing stakeholder interests in

decision-making (Hahn *et al.*, 2014; Lowe and Chua, 1983). This type of Thinking requires individuals to welcome change and uncertainty and strive for continual improvement (Martin, 2007; McGuigan *et al.*, 2020). Integrated Thinking has parallels with Integrative Thinking, described as "the ability to think and act responsibly and responsively in the face of multiple, incommensurable, and possibly conflicting models of oneself, the world, and others" (Moldoveanu, 2008, p48).

Integrated Thinking has been described by the International Integrated Reporting Council (IIRC) as "the active consideration by an organisation of the relationships between its various operating and functional units and the capitals that the organisation uses or affects" (IIRC, 2013, p2) and as "a multi-capital management approach" (IIRC, 2020, p5). The 'capitals' referred to are the six capitals of Integrated Reporting, namely: financial, human, natural, social, intellectual and manufactured. It is Integrated Thinking's association with Integrated Reporting (IR), a financial reporting framework, that makes it particularly relevant to our paper. The goal of IR is for organisations to report to a broad range of stakeholders on how they create, maintain, and destroy value over time, concerning six 'capitals'. Underpinning the reporting is the Thinking – that organisations will need to balance their actions against each other and make trade-offs across the capitals, weighing up, for example, the consequences of improving financial capital at the expense of natural capital. The original purpose of IR was not just the provision of information but the fundamental transformation of the reporting organisation through Integrated Thinking (Eccles and Serafeim, 2015). There is concern that IR has become increasingly focused on investor concerns rather than broader environmental and social concerns, following its 'capture' by investor-centric bodies such as the ISSB (see Deegan (2020), De Villiers and Dimes (2022) and Flower (2015)). Nonetheless, several reporting bodies claim that Integrated Thinking can help to embed more sustainable business practices

(IFRS, 2022) and many practitioners have expressed a desire to understand how decision-making can be improved via Integrated Thinking (IIRC, 2017).

Oliver *et al.* (2016) refer to two types of Integrated Thinking - the 'hard' Integrated Thinking that is implied through its association with the six capitals of IR, and 'soft' Integrated Thinking, which reflects the capacity to "constructively face the tensions between corporate efficiency and a model that considers broader societal health and well-being" (Oliver *et al.*, 2016, p229). It is the latter, the softer type, that is the focus of this paper. 'Soft' Integrated Thinking incorporates the notion of connectivity across capitals and time, and is less associated with organisational reporting. It is therefore more appropriate for conversations around how Integrated Thinking may address broader grand challenges rather than organisational-level ones. However, while 'soft' Integrated Thinking and its notion of connectivity across capitals and time sounds admirable, there is much debate as to what it looks like in practice and whether (and if so, how) it is possible to 'achieve' it. While it is viewed as idealistic by some (Gibassier *et al.*, 2018; La Torre *et al.*, 2018), others perceive it more as an ongoing journey rather than a destination (Massingham, *et al.*, 2019). Conceptualising Integrated Thinking as part of the vital 'loop' that connects constituent parts to a whole may mean that it is better perceived as a journey or a practice rather than an end-state.

In their 2024 study on Integrated Thinking in practice, Dimes and De Villiers focused on the organisational attributes necessary for Integrated Thinking to thrive, analysing evidence from 66 academic studies that provided firsthand (case study and interview) evidence of Integrated Thinking in practice. The authors distilled their findings into four 'hallmarks' that described the features necessary for this thinking to drive positive change, namely: (1) Leadership commitment and understanding at the top of an organisation, recognising the importance of a change of thinking at the top governance and executive levels of an organisation to facilitate change anywhere else (2) Active engagement with a broad range of stakeholders to develop an

integrated strategy and appropriate organisational goals and incentives (3) An organisational culture of trust and collaboration to address the tensions likely to arise from trade-offs and to focus on knowledge sharing and communication and (4) Suitable information systems and management processes to provide the Integrated Intelligence necessary for decision-making. The authors noted that changing an organisational mindset to adapt to a different way of Thinking often required deliberate and complex changes to an organisation's strategy, culture and systems, with systems and ways of working identified by practitioners as the area of most significant challenge.

### *2.3 Integrated Thinking in addressing Grand Challenges*

In this paper, we argue that not only are new accounting and accountability frameworks necessary but that fundamentally new ways of Thinking are needed to cope with the fluidity and uncertainty of addressing grand challenges. Developing solutions to grand challenges will inevitably involve tensions, as numerous competing stakeholders are involved. Such tension may be a necessary part of addressing grand challenges, particularly if it is harnessed in a positive way through different ways of Thinking that encompass a more holistic approach to problem-solving. New ways of Thinking can encourage connections across boundaries of time, space and discipline, providing an essential virtuous 'loop' connecting organisations and actors in their actions towards change. Dimes and De Villiers (2024) provide several examples from the literature that illustrate the potential applicability of Integrated Thinking to grand challenges. To give just one example, Al-Htaybat and Von Alberti-Alhtaybat (2018) studied an organisation that engaged with a direct competitor to use under-utilised manufacturing space, resulting in their subsequent adoption of a more asset-light and agile business model. This illustrates how an extension of trust towards external stakeholders could help in the development of collaborative partnerships that support a circular economy. Such an approach

could be applied to grand challenges, as it shows how organisations and individuals with competing ideologies could join forces to solve broader issues.

Granà *et al.* (2025) review the interdisciplinary literature on grand challenges and propose a framework to highlight the changes that are necessary within organisations to deliver solutions to them. In particular, they focus on connection between purpose, planning, transferability and systemic changes. Their framework shows arrows looping between these sections. The focus of this paper is on those arrows and the 'loop', which we propose represents Integrated Thinking. In addition to the loops within an organisation, we also propose a circular loop, shown in Figure 1, to represent the importance of considering factors outside the organisation and to consider different timeframes and contexts.

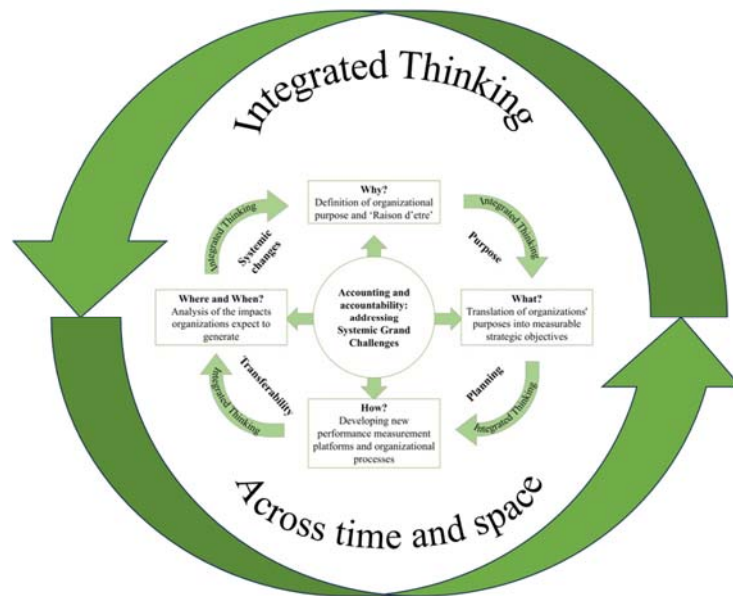


Figure 1: Integrated Thinking to address systemic grand challenges. Source: Authors' own elaboration, extending Granà *et al.* (2025) and Busco (2022).

Source: Constructed and developed by the authors

### 3. Critique

In this section, we consider the papers included in this Special Issue in terms of their relation to Integrated Thinking and our new conceptual framework. We structure the section according

to the connections in Figure 1, starting from the top centre ('Why') and moving to the right ('What') and so on. We highlight contributions from the papers that address the connectivity between these concepts. As our framework is conceptual, and the papers cover many (in some cases, all) areas within the framework, the aim of this section is illustrative; we do not aim to provide a comprehensive overview of all of the potential links.

### **3.1 From 'Why' to 'What'**

Several articles in this volume continue a theme from Granà *et al.* (2025), that of the corporate form and its suitability to address grand challenges given a company's focus on profit as the ultimate motive. These articles focus on what different corporate forms could look like to address a broader notion of accountability, and in doing so provide a connection between purpose ('why') and strategy ('what'). Before purpose is translated into action, thought needs to be given to the nature of organisations themselves and how that will inform its objectives. How organisational forms relate to one another, and how organisations relate to future generations and society at large is important in finding solutions that meet broad stakeholder needs.

Gazzola *et al.* (2025) consider the readiness and predisposition of companies to adopt and report on sustainable processes in response to the Corporate Sustainability Reporting Directive (CSRD). Their article "Sustainable or not sustainable? The readiness of Italian companies to the sustainable process integration and reporting" focuses on a comparison between SMEs and BCorps in Italy in response to the requirements of the CSRD. The authors derive an index for comparison and find that BCorps exhibit more readiness than SMEs. Considering the dominance of SMEs as a corporate form in Italy, this is a finding that highlights the benefits of the BCorp form in encouraging the adoption of sustainability. The authors discuss the suitability of the BCorp form to address global grand challenges due to its ability to build more inclusive and sustainable economies. The lack of readiness in SMEs highlights the limits of

traditional corporate forms in addressing complex challenges, in particular adapting to changes that promote sustainability. If the purpose of the organisation is on maximising shareholder wealth, then it is unlikely that SMEs will be able to balance the tensions from managing multiple forms of capital. Although their findings focus on the comparison between two different types of organisational form, their points echo those made by Taylor and Williams (2025), who focus on the legal form of the corporation and argue that this is central to addressing grand challenges. The legal and accounting construction of corporate purpose to focus on shareholder maximisation can result in meaningful change being impossible, as only a broadening out to incorporate the perspectives of other stakeholders can encourage accountability.

The role of different organisational forms is also the focus of an article by Maughan and O'Dochartaigh (2025) "Dialogic accounting in a multi-stakeholder initiative: Examining the role of state, semi-state and civil society actors in agrifood sustainability". Their study focuses on a multi-stakeholder initiative that involves private, public and civil society actors. The authors use documentary evidence, interviews, media and event attendance to show how responsibility' networks' extend accountability beyond the corporate boundary. This contribution highlights how Integrated Thinking needs to extend beyond the boundaries of the firm and to encompass not only consultation with broader stakeholder groups, but new organisational forms.

Integrated Thinking encourages a holistic view of activity in the face of multiple, changing pressures. While the articles discussed above highlight the limitations of certain organisational forms in achieving broader change, existing organisational forms may not be doing enough to maximise their opportunity to influence. De Villiers *et al.* (2025) discuss universities as potential catalysts of change due to their unique societal position and influence on future

generations. Focusing on the drivers of sustainability performance in universities, they reflect on the role of universities in driving this change.

### **3.2 From 'What' to 'How'**

Having the most appropriate organisational form, with objectives that consider broader social and environmental perspectives, is one step; realising those objectives requires incorporating them into performance measurement systems and processes, many of which will need to flex and adapt. This section focuses on the notion of quantification in moving from 'what' to 'how', and considers whether quantification enhances or hinders accountability to a broader set of stakeholders. Dimes and De Villiers (2024) highlight 'Integrated Intelligence' (a combination of suitable combined metrics and forms of collaborative decision-making) as one of the key hallmarks of Integrated Thinking, but the one that practitioners struggle with the most in practice. The submissions to this Special Issue offer a variety of perspectives on this issue, with several proposing novel solutions to quantification, whilst acknowledging the challenges of implementing them. A unifying insight from Granà *et al.* (2025), continued in this paper, is the need to reimagine accounting and governance practices to address present and future systemic and environmental and social challenges.

Oppi *et al.* (2025) reflect on the development and implementation of gender-responsive budgeting (GRB) in a university setting, using action research methodology. Their article 'Gender accounting in action: Institutional work and the introduction of different accounting logics in universities' centres on the importance of understanding the context for successful institutionalisation of a gender accounting tool. The researchers engaged in discussions aimed at implementing new institutions to challenge existing accounting logics. They focus on the importance of understanding that even if an initiative appears sound, its success is dependent on several factors, including top management support. They found that inter-organisational

collaboration and networks were necessary to support the formation of a dedicated group, with dedicated actors passionate about the project. Supporting De Villiers *et al.* (2025), the authors focus on universities as agents of change and an important context in which to conduct research. Perkiss *et al.* (2025) show how accounting academics can partner with organisations to develop new solutions for accountability, responding to calls for a deeper engagement with practice. In their paper 'accountability to tackle sustainability challenges in the cocoa supply chain', the authors reflect on the development of a novel accounting tool (The Chocolate Scorecard). They perform a thematic analysis of feedback sessions with stakeholders in the Chocolate Scorecard and reflect on findings emerging from this dialogue. Their findings support earlier observations in this section – that even with a novel tool, dialogue, engagement and collaboration are essential in delivering any meaningful change.

Even if novel metrics are developed (see Pastore *et al.*, 2025 for an example of Measuring Sustainability Impacts through SROI in the Italian Glass Industry), it is important to understand not only the rapidly evolving context in which these metrics need to apply, but also the way in which quantitative measures are shaped during the development process. Sobkowiak and Cuckston (2025) present a case of a new performance measurement system for wild bird indicators, conceptualised as a chain of inscriptions. They highlight how more flexible and adaptable types of calculative practice can enable a more fluid form of agency and accountability which helps when accounting for complex ecological challenges.

The articles presented in this section highlight the paradox between accounting enabling the quantification of factors that help with accountability, while simultaneously reducing abstract and complex phenomena to numerical form. This has long been a challenge for accounting and accounting research (see Alawattage *et al.*, 2021). Research on Integrated Thinking highlights the importance of dialogue and discussion in breaking down barriers and silos to encourage

innovation. Several studies from that literature (Dimes and De Villiers, 2020, Feng *et al.*, 2017; Giovannoni and Maraghini, 2013, Guthrie *et al.*, 2017 and Rodríguez-Gutiérrez *et al.*, 2019) consider cross-functional, inter-disciplinary teams as key mechanisms of change. This is also evident in this section, with the articles employing a wide variety of research approaches on the topic of quantification, engaging with a broad range of stakeholders and all focusing on the importance collaboration, dialogue and discussion and the incorporation of lived experience. Novel disclosures, metrics and frameworks will not necessarily lead to any meaningful change without continual discussion, learning and refinement (Dillard and Vinnari, 2019; Rinaldi *et al.* 2014).

### **3.3 From 'How' to 'Where and When'**

A central theme in recent critical accounting literature is the challenge of accounting needing to adapt to incorporate consequences from the past that may be realised far into the future (see Tregigda and Laine, 2022). This theme is central to moving from 'how' to 'where and when', and in moving from an organisational level of accountability to a broader one that considers both context and time. Accounting measures that incorporate social and environmental factors in the present but fail to consider the future will never fully capture social and environmental problems.

Several articles focus on this challenge from the perspectives of different indigenous cultures. Indigenous cultures have long incorporated a broader notion of stewardship for the planet and for future generations. Liu *et al.* (2025) show how environmental justice and Indigenous rights are clearly and inextricably linked to an organisation's core purpose and cannot be perceived as externalities. Scobie *et al.* (2025) also consider indigenous perspectives and propose a framework for determining and setting objectives as immediate obligations that honour both the past and the future (ancestors and descendants). Setting such objectives in the present helps

to avoid the procrastination, long-termism and delayed action highlighted by Tregidga and Laine (2022).

Research on Integrated Thinking highlights the importance of a collective responsibility and accountability (see Lodhia, 2015) in the face of issues that span across different timeframes. Integrated Reporting (accompanied by Integrated Thinking), despite criticisms of its recent capture by the ISSB, is intended to capture future considerations through its incorporation of natural and human capitals into decision-making processes (Adams, 2015). This incorporation comes more naturally to certain organisations than others but evidence from the public sector and from different indigenous cultures shows that it is possible in practice, and that important lessons could be learned through research in these areas.

### **3.4 From 'Where and When' back to 'Why'**

Considering a broader perspective and conceptualising organisations and the planet as perpetually changing means that organisational purpose requires constant attention and revision. Accountability is a dynamic construct rather than a static process (Dillard and Vinnari, 2019). Mazzola *et al.* (2025) consider a specific and significant grand challenge: the alleviation of poverty. In their article 'Problematizing grand challenges through accounting inscriptions: the case of poverty', they use semi-structured interviews and observations to consider different representations of poverty across different groups. They find that funders and policymakers perceive poverty as a financial problem, using metrics such as poverty lines and thresholds. Those experiencing poverty, or trying to tackle it on the ground, emphasise its multi-dimensional nature. They extend the narrative beyond economic measures of deprivation to consider social exclusion, mental health challenges, and a lack of opportunities as key contributing factors. Their article addresses the key point that grand challenges are perceived differently by different actors, and that accounting practices focused on metrics may serve to

diminish the focus on other, equally important, factors contributing to the problem. Lai *et al.* (2025), in their article 'Multivocal accountability in grand challenges: the Italian government's response to Covid-19 between science and politics' focus on how accountability changes over time, and how different justifications are used by different actors. They focus on the tension between scientific and political perspectives in the aftermath of the pandemic. Their paper considers the concept of multivocality and how to account for diverse and conflicting perspectives.

The notion of evolving narratives in the pursuit of accountability is continued by two further papers, which also highlight the importance of power dynamics in the drive towards addressing grand challenges. Research by Senn *et al.* (2025) shows how an NGO dedicated to gender equality evolved its reporting objectives between 1995 and 2021, gradually shifting from a narrative that reinforced traditional gender roles (emphasising "complementarity" with men in primary positions) to a reporting that aspires toward greater inclusivity in gender representation (Senn *et al.*, 2025). Tension between stakeholders is the subject of an article by Carungu *et al.* (2025) 'Confronting sustainability grand challenges: How do Standard-Setters Shape Sustainability Reporting Standards and Accountability Practices?'. The authors focus on the power struggles between key stakeholders in the standard setting process through a thematic analysis of public documents. Their paper shows standard setting as a contested and political process where legitimacy and influence are constantly negotiated. Rather than standard setting being a purely technical process, they highlight the importance of concepts such as interoperability, materiality and connectivity when setting sustainability reporting standards.

The papers in this section continue the theme of discussion and collaboration but introduce the challenges associated with this, in particular power dynamics at play between stakeholders. Despite increasing commitments to social and environmental issues at an organisational, national and global level, the influence of wealthy and powerful stakeholders dominates,

influencing narratives and future directions. Dimes and De Villiers (2024), in their review of the literature on Integrated Thinking, consider a culture of trust essential in overcoming these deep tensions. While this may be achievable at an organisational level through changes in organisational culture and practice, overarching political narratives make trust harder to achieve at a national and international level. Rapid changes in priorities since the re-election of Trump in 2025 highlight how quickly things can change based on political agendas (Fowler, 2025). Yet many organisations and individuals remain committed to a better way of accounting for broader social and environmental issues. In the next section, we explore the multiple ways in which accounting academics can encourage Integrated Thinking in their research practices and their institutions.

#### **4 Transformative Redefinition**

In the third stage of their critical framework, Alvesson and Deetz (2000) propose that without a commitment and call to action, the purpose of critical reflection is lost. In this section, we propose how Integrated Thinking could be applied to research into addressing grand challenges and to our actions as academics more generally. To set the scene for this discussion, in Figure 2 we adapt our earlier Figure 1 framework to an academic research setting, highlighting how a more holistic way of Thinking could help academics to drive real change towards addressing grand challenges. We structure the rest of this section along these lines, focusing again on the 'Integrated Thinking' loop' between the why, what, how, where and when of academic research. In each section, we consider how Integrated Thinking applies to current academic activities and conclude with questions for academics to reflect on.

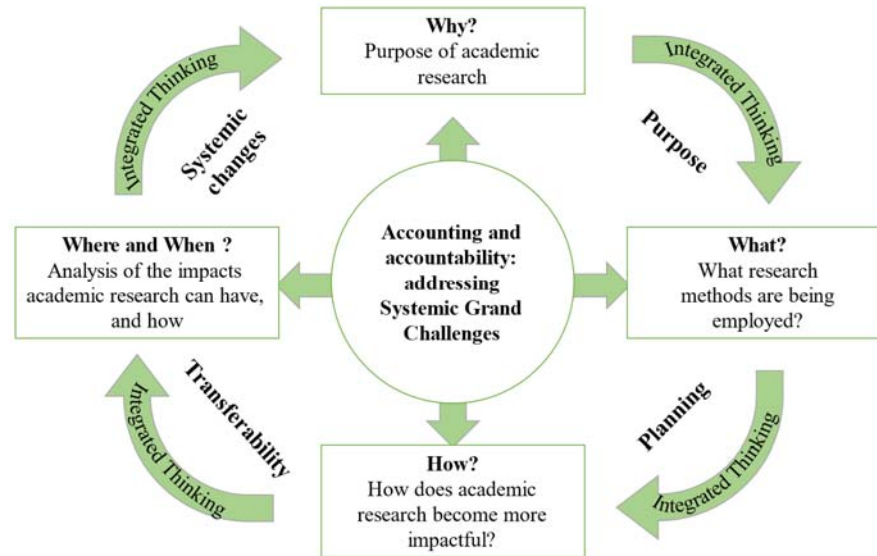


Figure 2: Integrated Thinking for academic research into addressing grand challenges

Source: Constructed and developed by the authors

#### 4.1 The purpose of academic research, and current research approaches

In their 'Opening Accounting' manifesto, Alawattage *et al.* (2021) criticise accounting academics for using established research methods to address narrow accounting research topics (mainly relating to capital markets) rather than developing novel methods to address the major social and environmental issues of our time. The contributions in this two-volume special issue reflect the many ways in which accounting academics can extend beyond these traditional research boundaries. The 14 contributions to the Special Issue (split across Granà *et al.* (2025) as Volume 1 and Dimes *et al.* (2025) as Volume 2) are summarised in Appendix 1.

A notable feature of these research articles is their focus on qualitative analysis, particularly on analysis of discourse. Many of them emphasise the challenges faced by organisations trying to adapt to broader metrics that incorporate social and environmental considerations. In addition, they show considerable engagement with practice through case studies, interventions and action research. The issue raised by Alawattage *et al.* (2021) does not, therefore, seem to be with accounting researchers themselves and their capability to create meaningful research that engages with practice and addresses the major challenges of our time. The issue concerns the perceived value of this type of research to the accounting discipline, in particular to the major accounting journals that still see accounting as a predominantly technical practice and publish papers that fit that narrative (Roberts, 2018). This disciplinary insularity limits the accounting research community's potential contribution to addressing grand challenges (Bebbington and Larrinaga, 2014; Parker and Guthrie, 2014).

The rise in ranking and influence of interdisciplinary journals such as AAAJ highlights a flourishing community of academics committed to changing the status quo (Guthrie *et al.*, 2019). Universities are heavily focused on metrics and rankings, and as the profile of interdisciplinary journals continues to rise it is possible for academics to pursue research into topics they feel passionate about without feeling the pressure to publish in more 'mainstream' accounting journals. However, two problems remain. Firstly, the so-called 'mainstream' journals continue to focus on narrow technical accounting and auditing matters. Is the rise of alternative outlets like AAAJ really the solution? Have interdisciplinary and critical accounting academics given up on trying to get published in the 'mainstream' accounting journals, and does this in turn contribute to the problem? Secondly, the papers included within this Special Issue are all written by accounting academics. Academics from outside the discipline are not actively encouraged to submit to accounting journals or to co-author alongside accounting academics.

Brammer *et al.* (2019) also note how current publication processes and practices could limit management research into Grand Challenges more generally. Could journal editors actively seek more contributions and reflections of academics from outside the discipline? Could accounting academics be rewarded for co-authoring papers with academics from the natural and social sciences or for working alongside practitioners? Such approaches would meet resistance due to university performance management systems that prioritise disciplinary focus but would highlight a willingness to trust in academics from other disciplines and break down silos – a demonstration of Integrated Thinking principles as applied to academic research.

#### **4.2 Making research more impactful**

The 'impact' of academic research is subject to varying definitions and interpretations. A performance management culture within institutions means that publications in highly-ranked journals remain key to promotion and tenure decisions, despite the fact that these ranking systems may not align with citation metrics or broader notions of impact in practice and society (Guthrie *et al.*, 2019). A focus on metrics rather than action means that a commitment to social and environmental issues can be seen as an exercise in legitimacy rather than an opportunity for change (Shattock, 2017; Swartz *et al.*, 2019). Use of metrics is pervasive and has a heavy influence on academic activity, particularly on younger academics. Playing the publication 'game' in accounting journals involves a substantial amount academic time and effort that can be wasted if the research never sees the light of day (Moizer, 2009). Yet the rise of Big Data, AI and social media and increasing criticism of the behaviour of commercial publishing houses may lead to major changes in this area over the next decade. From an Integrated Thinking perspective, this leads to further questions to reflect on as academics: Are we using all available means to ensure that our research has impact? Is our research incorporated into our teaching to influence students – the managers of the future? Do we actively try to attract new PhD students

into these areas? Do we disseminate our findings on social media and promote them to practitioners?

### **4.3 Connecting research to other activities**

Universities occupy a unique position in society, with the potential to shape life-long learning and drive societal change. Our activities as academics can help to institutionalise more sustainable practices through research, teaching and service (De Villiers *et al.*, 2025). Although much of the discussion so far has been dedicated to research activities, an Integrated Thinking perspective should encourage us to think about our activities in both teaching and service alongside our research, and how connections across all of our academic activities can help us to prioritise broader notions of accounting and accountability.

Ballantine *et al.* (2024) highlight that little has changed in accounting education for the past fifty years and make an urgent call for this to change, particularly in the context of recent advances in Artificial Intelligence. If teaching reflects societal and cultural norms (Lukman *et al.*, 2010), then our teaching practices mirror what is still perceived to be the 'norm' for the accounting discipline. Most university courses remain fixated on technical content, despite calls from both academics and practitioners to recognise accounting as a social practice and to develop more interdisciplinary approaches (Boyce, 2008; Carnegie 2021; Pimentel *et al.*, 2023). Students are passionate about social and environmental issues and are attracted to universities that prioritise them. Funders and university rankings bodies also increasingly consider broader issues (De Villiers *et al.*, 2025). Although we are teaching the decision-makers of the future every day, the curriculum and teaching strategies in many institutions remain stubbornly stuck in the past.

Cho and Costa (2024) stress the need for different pedagogies alongside a transformed curriculum to promote the importance of broader sustainability issues. There are many ideas for how to do this in the accounting education literature (see THE, 2025 for some examples) and innovative free resources that have been developed along these lines. As just one simple example, Accounting Streams (2025) suggests teaching cases that focus on BCORPs instead of the traditional large Western listed corporations that dominate many accounting textbooks. Accounting Streams is a good example of Integrated Thinking in practice. This initiative was developed by accounting academics acting as a collective to provide the resources necessary to change curricula, reducing the need for institutions to reinvent the wheel and saving considerable academic time in the process (see Accounting Streams, 2025). If there are so many good examples by accounting academics of how to incorporate broader issues into the accounting curriculum, why are these not being adopted more broadly? Is there a lack of time and incentive given the focus on research metrics? If so, can we persuade university managers for the need for the need to focus on teaching by referencing its importance in attracting future students? If we lack the time and resources to do major changes on our own, can we do this as a collective?

In addition to teaching activities, academics undertake service activities at various levels, including reviewing and editing, conference organisation, committee work, university administration and governance, and policy and advocacy roles. These activities are seen as 'eating into' the time that academics should be dedicating to research and teaching. Beatson *et al.* (2021) and Smith and Walker (2024) express disappointment in the decline in academic citizenship, noting the shift away from collegial activity to a focus on managing performance metrics. From an Integrated Thinking perspective, though, all of these activities are interconnected. Many of these service roles are highly influential, even if this influence may not seem evident at the time. Internal service roles are essential in developing a suitable culture

to make change, a key feature of success for Integrated Thinking. If academics don't sit on committees that consider promotion criteria, how can we expect those criteria, and the attendant behaviours, to change? Likewise, external service, connecting a broad range of stakeholders with university research, teaching and service, is also essential for embracing different perspectives.

### **From impact to purpose**

Connecting our actions in research, teaching and service activities through a more holistic approach should help to raise the profile of accounting as a social and moral practice. These activities should reinforce each other in a virtuous loop, encouraging incremental changes over time. Even though small changes may seem insignificant now, in retrospect they may change behaviour significantly. These small changes should help to reinforce the overall purpose of universities to generate and disseminate new knowledge and to act as champions of change. Following Guthrie *et al.* (2019), we urge accounting academics to remain optimistic in their research and activities in the face of the multiple challenges they face, as the actions of academics today pave the way for the academics and students of the future.

## **5 Conclusion**

As climate change, geopolitical tensions and inequalities intensify, academic attention is increasingly drawn how they might be addressed (Bebbington and Unerman, 2018; Hopper, 2019; Sobkowiak *et al.*, 2020). Although grand challenges are portrayed as complex and significant, they are not deemed insurmountable. These global problems can be solved through sustained collaborative effort from multiple stakeholders (Eisenhardt *et al.*, 2016, George *et al.*, 2016). However, this way of solving problems does not come naturally to a discipline traditionally focused on historic financial metrics and a bias towards quantification. This paper

shows how the field of accounting research, and our other actions as academics, can make a positive contribution to addressing these challenges by considering them from an Integrated Thinking perspective.

Integrated Thinking is a holistic approach to decision-making that encourages organisations and individuals to consider the whole as more important than its constituent parts and to focus their attention accordingly. This type of thinking requires committed leadership, engagement with a broad range of stakeholders, the promotion of a culture of trust and collaboration and the development of innovative yet robust ways of gathering information (Dimes and De Villiers, 2024). It is a process of continual renewal and refinement, requiring constant dialogue, negotiation and learning. We reflect on the contributions to this Special Issue in light of Integrated Thinking and reflects on its implications for the academic community.

Our findings highlight how accounting and accountability practices are continually being reconstructed, and how dialogue is an essential part of this process. Novel disclosures, metrics and frameworks will not necessarily lead to any meaningful change without continual discussion, learning and refinement (Dillard and Vinnari, 2019; Rinaldi *et al.* 2014). The research introduced and discussed in this paper highlights the capacity for accounting academics to develop and investigate novel ways of accountability, to critically analyse the discourse around accounting and accountability and to engage with practice. The research is predominantly qualitative and emphasises the notion of accounting and accountability being under a process of continual development and refinement. Discussion and collaboration emerge as key themes. Integrated Thinking is based on the notion that every action, no matter how small, has a consequence for the broader ecosystem that we operate in. The journey, and the connectivity between actions, may be more important than the destination. We provide a series of reflections and reminders for academics, highlighting the importance of continual dialogue

and academic citizenship in developing and promoting research, teaching and service that helps to address the grand challenges of the world.

This paper contributes to the literature on accounting and accountability practices in addressing grand challenges by focusing on connectivity through Integrated Thinking. We extend the framework proposed by Granà *et al.* (2025) to incorporate the notion of Integrated Thinking, proposing that considerations of the whole, rather than a focus on individual parts, may help with actions to address grand challenges. Integrated Thinking can help to improve collaboration, connection, and coordination, key to addressing grand challenges (Ferraro *et al.*, 2015); George *et al.*, 2016). We also extend the literature on Integrated Thinking by applying principles of Integrated Thinking both to grand challenges and to academic activity, supporting calls to action for accounting academics to adapt to our rapidly changing world (Ballantine *et al.*, 2024; Parker, 2011).

This paper is intended as a conceptual one that encourages a reflection on our contributions as part of a broader system. Although we consider the literature on Integrated Thinking to add value to our discussion, we recognise that Integrated Thinking is a socially constructed, multi-dimensional and abstract phenomenon (Dimes and De Villiers, 2024). In addition, we reflect on the papers that form part of this Special Issue, rather than conducting a systematic review of the literature on accounting and grand challenges. Nonetheless, we hope that it serves as an important reminder of the connectivity between all of our activities. It may also offer insights for practitioners keen to connect their organisational activities with the broader issues facing society.

The discussion in this paper leads to several thoughts as to future research directions. In particular, researchers might use the conceptual framework in Figure 2 to derive further research questions, for example:

- How do organisations make connections between their purpose and their performance metrics? How do they adapt their metrics in the face of rapid social, environmental and political change?
- Several organisations have recently dialled down their commitments to social and environmental concerns. Were these always shallow commitments, or have changes to organisational culture and metrics been made? What is the nature of these changes?
- How do organisations reflect time and context in their design of performance metrics? Is this a process of continual refinement? If so, how is accountability enacted?
- How does the public sector compare with the private sector in terms of connecting purpose with accountability?

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**Appendix 1: Summary of articles contributing to the Special Issue on the role of accounting and accountability in addressing grand challenges.**

These 14 articles are split across two volumes of the Special Issue: Volume 1 by Grana *et al.* (2025) and Volume 2 by Dimes *et al.* (2025).

Authors	Vol #	Title	Topic	Research Method
Taylor & Williams	1	Addressing grand challenges: the problem of accountability for the corporate form	Draws from other disciplines (philosophy, history etc) to discuss problems with the corporate form	Qualitative - Conceptual paper
De Villiers, Dimes, Hoque, Hu & Molinari	1	University sustainability performance as a catalyst for societal change	Considers factors driving university sustainability performance	Quantitative - regression analysis
Pastore, Corvo, Santangelo, Resce, & Lelo	1	Measuring Sustainability Impacts through SROI: A Case Study of the Italian Glass Industry's Contribution to the SDGS	Studies the application of a sustainable return on investment metric in the Italian glass industry	Quantitative – analysis of an SROI case
Sobkowiak & Cuckston	1	Solidity and Fluidity in the Quantification of Nature Recovery: Wild Bird Indicators in the UK	Case study based on actor-network theory	Qualitative - case study
Senn, Maire & Ghio	1	Constructing gender through reporting: Unveiling the rhetorical strategies of an NGO from 1995 to 2021	The role of organisational reporting in promoting gender ideology	Qualitative – discourse and imagery analysis
Liu, Neu, Saxton, Rahaman, Taylor-Neu & Everett	1	Taking Indigenous Peoples into Account: Semantic Meanings in the Environmental Disclosures of Resource Extraction Firms	Review of the portrayal of the environment and indigenous peoples in corporate disclosures	Qualitative - content analysis
Scobie, Norris & Wilson	1	Intergenerational accountability in the times of a just transition	Considers the way that ancestor and dependant viewpoints are incorporated into accountability	Qualitative – case study
Gazzola, Amelio, Litardi & Bovi	2	Sustainable or not sustainable? The readiness of Italian companies to the sustainable process integration and reporting	Derives an index for a comparative study on SME and BCorp readiness for CSR	Quantitative (development of an index to identify readiness for sustainability)
Maughan and O'Dochartaigh	2	Dialogic accounting in a multi-stakeholder initiative: Examining the role of state, semi-state and civil society actors in agrifood sustainability	How accountability is developed and determined for a multi-stakeholder initiative	Qualitative - Thematic analysis of discourse
Oppi, Galizzi and Liccardo	2	Gender accounting in action: Institutional work and the introduction of different accounting logics in universities	Reflecting on the implementation of gender-based budgeting (GRB) at a university	Action research using a university case study
Perkiss, Dumay, Bernardi, Beattie & Harris	2	Accountability to tackle sustainability challenges in the cocoa supply chain	Dialogues among stakeholders of the Chocolate Scorecard initiative	Qualitative - Thematic analysis of dialogue
Mazzola, Contrafatto & Ferguson	2	Problematising grand challenges through accounting inscriptions: the case of poverty'.	Considers how power dynamics influence the conceptualisation of poverty between those experiencing poverty and those trying to alleviate it.	Qualitative - Thematic analysis of discourse
Carungu, Di Pietra, Molinari & Nicolo	2	Confronting sustainability grand challenges: How do Standard-Setters Shape Sustainability Reporting Standards and Accountability Practices?	Investigates the power dynamics inherent in the process of setting sustainability reporting standards	Qualitative - Thematic analysis of discourse
Lai, Leoni & Stacchezzini	2	Multivocal Accountability in Grand Challenges: The Italian Government's Response to Covid-19 between Science and Politics.	Investigates the changing discourse around accountability between politics and science during the Covid-19 pandemic in Italy	Qualitative - Thematic analysis of discourse

Source: Constructed by the authors