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The Future is Connection:

Collaboration, Creativity and Compassion in a Digital Society

Designing through ambiguity: A postgraduate capstone for an uncertain digital society

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In a world of overlapping technological, environmental and social disruptions, higher education must move beyond transmitting knowledge towards cultivating the capacity to question, evaluate and respond under uncertainty. This conceptual paper presents the curriculum design of a 12-week postgraduate accounting capstone built around a pedagogy of ambiguity and supported by high-touch relational teaching. The curriculum combines contemporary topics such as AI acumen, media literacy, geopolitics and climate change with stable table-based groups, explicit teaching of active listening and brave conversations, repeated oral dialogue, weekly team submissions, community volunteering, and a professional identity storybook. A scaffolded five-stage framework is proposed to guide students to encounter ambiguity, interpret it together, create possibilities, articulate their thinking, and reflect on and reconstruct their professional identity. This conceptual curriculum-design paper proposes that when ambiguity is deliberately designed, modelled and supported through relational teaching, it can create the conditions for collaboration, creativity, confidence, and compassion in a changing digital society.

Keywords: conceptual framework, pedagogy of ambiguity, large classroom, human-centric pedagogy, capstone, collaboration, creativity, compassion

Introduction

Graduates are entering a labour market shaped by artificial intelligence (AI), climate risk, misinformation, geopolitical instability and changing stakeholder expectations (McKinsey & Company, 2024). In this environment, answers can be generated quickly, yet information may be unreliable, incomplete or contested, and professional decisions often involve competing perspectives and uncertain consequences. The educational task is therefore shifting from helping students find answers to helping them ask better questions, evaluate what they encounter and decide how to respond (Vendrell & Johnston, 2026). This requires curiosity to look beneath the first answer, collaboration to test assumptions against the perspectives of others, creativity to reframe problems, and compassion to consider relationships and consequences. Innovative course and assessment design is therefore necessary, not only to assess these capabilities but to deliberately develop them. This challenge is especially relevant in business education, where graduates work with abundant but uneven-quality information, rapidly changing technologies, contested evidence and decisions that carry social, environmental and organisational consequences.

This paper is positioned as a conceptual curriculum-design paper rather than an empirical evaluation of course effectiveness. It develops a scaffolded five-stage framework for learning through ambiguity, illustrated through a 12-week postgraduate accounting capstone. The framework shows how students can be supported to encounter ambiguity, interpret it with others, create possibilities, articulate their thinking, and reflect on how their understanding develops. The contribution of the paper is to show how ambiguity can be deliberately designed into a curriculum while still providing the clarity, structure and relational support students need to engage with uncertainty.

Theoretical background and conceptual framing

Ambiguity is increasingly recognised as a productive and intentional resource for learning rather than a difficulty to be eliminated (Kelly, 2023). Ambiguity is understood as the capacity to generate multiple interpretations rather than remain fixed on one answer (Orr & Shreeve, 2018). It can therefore create space for new questions, competing ideas and alternative possibilities. Ambiguity is also socially and culturally

constructed: what appears obvious, legitimate or uncertain may depend on disciplinary conventions, language, prior experience, and context (Fairclough, 1993; Kelly, 2023). A pedagogy of ambiguity consequently involves more than presenting students with difficult cases. It requires learners and educators to examine how problems are framed, which assumptions are operating and how meaning is negotiated. Research also links tolerance of ambiguity with creativity (Stoycheva, 2025; Zenasni et al., 2008); ambiguity in learning can enable new ideas to emerge when learners are required to interpret situations differently and move beyond established routines (Nowotny, 2016). In collaborative settings, this uncertainty creates a shared space for dialogue, negotiation and joint sensemaking. Students must explain their interpretations, listen to competing perspectives and construct responses that may not have emerged through individual work alone. In this sense, ambiguity is valuable not because it is vague, but because it can create the conditions for collaboration, reframing and creative possibility. Working with ambiguity may create opportunities to practise compassion, because uncertain tasks require students to notice different perspectives, listen carefully to others, and consider the human consequences of their judgments (Hamilton & Petty, 2023; Vandeyar & Swart, 2016). As students encounter incomplete evidence and competing viewpoints, they may practise inclusive dialogue, respectful disagreement, and attention to those who may be overlooked. A pedagogy of ambiguity can therefore support collaborative sensemaking, creativity and the relational habits associated with compassion.

A pedagogy of ambiguity does not mean making expectations unclear. Kelly (2023) highlights the tension between higher education's pursuit of clarity and ambiguity's potential as a productive force for change. If ambiguity is present without its purpose being made explicit, it may increase anxiety and negative attitudes towards learning. In this capstone, the design therefore combines intellectual ambiguity with pedagogical clarity. Assessment requirements, participation structures and expectations are explicit, while the problems themselves may contain incomplete or contested evidence, competing stakeholder interests and more than one defensible response. Relational teaching provides the support students need to engage with this uncertainty. Supportive conversations, empathy and encouragement can strengthen engagement and students' willingness to participate and exercise agency (Kahu & Nelson, 2018; Reeve et al., 2020). This is particularly important in a culturally and linguistically diverse cohort, where confidence, language, culture and neurodivergence may shape participation (Hamilton & Petty, 2023; Liu & Littlewood, 1997). Ambiguity is therefore introduced alongside instructor modelling, including demonstrations of how to begin and sustain table-based discussion, guided practice, feedback and personal connection. This scaffolded approach supports students in becoming more self-assured in working with uncertainty, a capacity Orr and Shreeve (2018) identify as increasingly important for uncertain employment contexts.

Bringing these strands together suggests three design premises. First, ambiguity should reside in the intellectual task rather than in expectations: uncertainty can be productive when requirements remain clear (Kelly, 2023). Second, ambiguity becomes educative through social interpretation: dialogue, facilitation and relational support help learners test assumptions and encounter perspectives they may not generate alone (Kahu & Nelson, 2018). Third, learners need opportunities to generate alternatives, articulate provisional reasoning and revisit what these encounters mean for professional judgment and identity (Nowotny, 2016; Shulman, 2005a, 2005b). The five stages translate these premises into recurring curriculum design aligned with the capstone architecture. This is a conceptual design informed by literature and curriculum practice, not categories derived from student data. In doing so, the framework extends accounting education work on design futuring from a discrete learning strategy (McGuigan et al., 2021) to curriculum-wide design.

Context and curriculum architecture

The capstone enrols approximately 350 postgraduate accounting students across four weekly workshops of around 100 students. Each workshop runs for three hours. Students form table-based teams in week one and remain with those teams for the semester, enabling stable relationships and shared ways of working. The curriculum integrates contemporary topics such as AI acumen, media and algorithmic literacy, geopolitics, climate change, Indigenous perspectives, sustainability and stakeholder expectations, together with experiential activities designed to support networking, peer learning, communication and inclusive participation.

Assessment extends this learning through weekly team submissions, weekly interactive oral assessment, community volunteering, participation in climate-related professional workshops and a final reflexive professional identity storybook. These elements are connected rather than isolated. Contemporary topics and workshop activities introduce ambiguity because they are designed to generate multiple legitimate perspectives, do not have a single correct answer, and require students to examine issues from different angles to construct a defensible response. Explicit teaching and modelling prepare students to engage; community events that are integrated into assessment create opportunities for relational connection; repeated practice provides opportunities to rehearse capabilities; and reflexive thinking invites students to examine whether and how their confidence and professional identity are changing.

The proposed five-stage framework

The framework is shown in Table 1. Although presented as five stages, it is intended as a recursive design heuristic rather than a linear model: stages may recur across a topic, workshop or semester. Instructor scaffolding and relational support run through every stage. Students are not expected to enter ambiguous tasks already confident; instead, the design provides preparation, modelling, experiential practice, feedback and reflection intended to support participation over time.

Table 1. *A scaffolded five-stage framework for learning through ambiguity*

Stage	Curriculum purpose	Instructor scaffolding	Capstone practice
Encounter ambiguity	Disrupt predetermined answers and prompt worthwhile questions.	Explain why uncertainty matters; model how to identify assumptions, missing evidence and unreliable information.	AI, media and algorithmic literacy, geopolitics, climate risk and sustainability cases.
Interpret together	Bring different perspectives into dialogue and test assumptions.	Demonstrate active listening, inclusive communication, peer-learning techniques and brave conversations.	Stable table groups, networking, team problems, peer discussion and selected technology-free activities.
Create possibilities	Reframe problems and construct defensible alternatives.	Use prompts, examples and repeated “why?” questions to demonstrate curiosity and reframing.	Open-ended cases without one predetermined conclusion, cross-topic connections and collective problem framing.
Articulate thinking	Explain and adjust reasoning through interaction.	Model how to explain a position, acknowledge uncertainty and respond to follow-up questions.	Weekly interactive oral assessment and guided one-to-one or table-based dialogue.
Reflect and reconstruct	Examine how thinking, confidence, relationships and identity may be changing.	Provide feedback, reflective prompts and examples of meaningful reflexive thinking.	Weekly team submissions, community volunteering, workshop participation and the professional identity storybook.

Illustrating the framework in curriculum practice

Encounter ambiguity

The first stage introduces uncertainty through both selected topics and classroom activities. Students work with incomplete, contested or uneven-quality information and activities without a single correct answer. Instructor scaffolding helps them identify what is known, missing, unreliable or assumed, and to examine framing, absent perspectives and alternative interpretations. In an AI-integrated society, the ability to ask better questions and construct defensible responses may be more enduring than the ability to retrieve rapid answers.

Interpret together

Ambiguity creates an authentic need for collaboration because one interpretation is rarely sufficient. Stable table-based teams allow students to build relationships and develop shared ways of working over time. Collaboration is explicitly framed as listening, questioning, explaining, challenging and revising, rather than simply dividing tasks. Staff model how to begin discussions, clarify ideas, invite participation, disagree respectfully and address uneven contributions. Attention is also given to how language, confidence, culture and neurodivergence may shape interaction. Students then practise these behaviours through repeated dialogue and shared problem-solving. This form of collaboration is intended to cultivate compassionate participation by asking students to recognise different needs, perspectives and ways of participating, and to respond with patience, respect and care. This reflects evidence that productive collaboration requires active facilitation rather than group formation alone (Le et al., 2018).

Create possibilities

Creativity is framed as curiosity, reframing, connection-making and the development of evidence-based alternatives. Staff model this through repeated "why?" questions and by showing how the same issue can be viewed from technical, social, environmental and ethical perspectives. Open-ended activities require students to compare interpretations and construct responses collectively. Collaboration can support creativity because another person's question, experience or perspective can interrupt automatic reasoning and open new possibilities.

Articulate thinking

Interactive oral assessment requires students to explain reasoning, respond to follow-up questions and adjust their position when challenged. Because the next question cannot be fully predicted, students may need to clarify assumptions, connect ideas or acknowledge uncertainty in the moment. This reflects Shulman's (2005a) view that professional education should prepare students to act when outcomes cannot be fully known, a capacity accounting professionals themselves must exercise when standards or evidence are ambiguous (Gul, 1986). The process is scaffolded through examples, prompts and supportive questioning. Repeated practice is intended to support confidence rather than treating confidence as a prerequisite for participation.

Reflect and reconstruct

Reflection is designed to help students examine whether and how their thinking, relationships and confidence are changing. Team submissions provide opportunities to reconsider ideas after discussion and feedback, while experiences beyond the classroom extend reflection to responsibility, contribution and consequences. The professional identity storybook brings these experiences together. Students select artefacts and construct a narrative explaining perceived changes in their understanding, tensions that remain and the kind of human and professional they are becoming.

Discussion

The central conceptual proposition is that ambiguity is not, by itself, a pedagogy: its educational value depends on how uncertainty is designed and supported. The framework positions ambiguity as the condition through which distinctly human capabilities can be developed. Ambiguity interrupts predetermined answers and prompts curiosity. Collaboration brings different interpretations into dialogue. Creativity enables students to reframe problems and construct possibilities. Compassion shapes how students engage with one another and direct attention to inclusion, relationships, communities and future consequences.

A second contribution is that the design also moves capability development from aspiration to deliberate curriculum practice. Collaboration, creativity and compassion are frequently named as desirable outcomes, but students may receive limited guidance about what these capabilities look like in action. In this capstone, capabilities are named, demonstrated, practised repeatedly and revisited through reflection. This aligns with Shulman's (2005b) concept of signature pedagogies, in which recurring forms of participation shape how learners think, act and communicate within a field.

Instructor scaffolding is central to this process. Students are not simply exposed to difficult topics or told to work in groups. Staff make expectations visible, model behaviours, provide language for participation, observe interaction, ask follow-up questions and offer feedback. The approach resembles Noddings' (1991) elements of caring education: modelling, dialogue, practice and confirmation. Compassion is therefore present both in the relational design of learning and in the wider consequences students are asked to consider.

Reflection and next steps

The framework also presents challenges. Ambiguity may be productive for some students but confusing or exclusionary for others. Stable groups can reproduce unequal participation unless staff continue to observe and intervene. Interactive oral assessment requires staffing, calibration and sensitivity to linguistic diversity. The framework should therefore be understood as a context-responsive design rather than a universal sequence. This paper does not analyse student reflections or other student data. No human-participant data are reported here. Future empirical evaluation will be reported separately with an explicit methodology and relevant institutional ethics process, examining how students experience the stages, how participation varies across contexts, and which design elements matter most for engaging constructively with uncertainty.

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