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The Future is Connection:
Collaboration, Creativity and Compassion in a Digital Society

Designing for creative expression in sustainability education: A practice-based framework for active digital learning environments

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Sustainability education often begins from a shared problem, but students do not arrive at it through shared assumptions, experiences, disciplines, or professional ambitions. This concise paper presents Sustainability & Creativity, an interdisciplinary elective at a transnational university in Vietnam, as a case study in designing digital learning environments where creative expression functions as both subject and method: a mode of encountering sustainability rather than simply a topic within it. The course uses media-rich Canvas modules, low-stakes group discussion, formative knowledge checks, and client-informed assessment to scaffold creative engagement. Synthesising established learning design theories and sustainability competencies, the paper articulates a four-stage practice-based framework for operationalising Canvas as a creative learning environment. Evidence from learning analytics and course evaluation data across six deliveries suggests design supported preparation, participation and applied sustainability learning. The paper contributes a practice-based model for designing digital learning environments where creative expression functions as an essential mode of sustainability learning rather than a peripheral addition. In doing so, it offers scalable strategies for higher education practitioners seeking to activate learning management systems as collaborative, creative spaces.

Keywords: sustainability education, blended learning, learning design framework, creative expression, transnational university, Vietnam

Introduction

Sustainability education presents a distinctive learning design challenge: while urgent and interdisciplinary, sustainability is not encountered by students in one consistent way. Students bring varied prior knowledge, cultural experiences, and disciplinary identities, understanding sustainability through climate change, environmental citizenship, fashion, tourism, advertising, social equity, or future employability. In contexts like Vietnam, where environmental education has often been shaped by policy discourse and institutional framing, designing environments that foster critical interpretation and personal agency is particularly vital (Pham, 2023). A learning design approach to sustainability must therefore create conditions in which students can locate themselves within sustainability and recognise how it matters to their own lives, communities, and future work.

This paper presents *Sustainability & Creativity*, an interdisciplinary elective at a transnational university in Vietnam, that introduces sustainability as an issue shaped by creative practice and thinking. The course examines the relationship between creativity and sustainability across cities, tourism, supply chains, and creative industries as the empirical basis for a replicable practice-based model. Students engage with environmental citizenship, ethical consumption, materiality, waste, cultural sustainability, and the United Nations Sustainable Development Goals (SDGs). The central learning design problem was how to position creative expression not merely as a topic to be studied, but as a mode through which students could genuinely encounter sustainability, test values, and develop professional identity. When creative expression is treated only as a final assessment product, it remains peripheral to learning. When embedded in the design of the environment itself, it becomes a mode of knowing (Eisner, 2002). Applied here, the design of the digital environment expands the range of ways students can encounter and respond to complex problems. This paper draws on course design documentation, Canvas learning analytics, and course evaluation data across six deliveries between 2022 and 2025.

Conceptualising creative expression in digital sustainability spaces

This paper defines creative expression in sustainability education as the iterative, value-driven process through which learners interpret complex socio-environmental problems, test agency, and negotiate multidisciplinary solutions. Drawing on Eisner (2002), creativity functions as an epistemological tool where making, composing, and reframing serve as primary modes of inquiry. This aligns with transformative sustainability education literature, which argues that addressing complex socio-ecological challenges requires shifting from transmissive content delivery toward participatory learning environments that foster critical agency and value clarification (Sterling, 2011; Wals, 2011). Creative expression in sustainability is measured not by artistic talent, but by a student's capacity to translate abstract challenges (e.g., the circular economy) into situated, human-scale responses.

Observing and evaluating this process within a digital learning environment requires moving past the view of the LMS as a passive administrative repository. Within Canvas, creative expression is made visible through three distinct behavioral and cognitive indicators:

- Interpretive Reframe (Pre-Class Preparation): Visible when students respond to asynchronous prompts (e.g., Padlet walls, low-stakes H5P checks, visual diagrams) by translating sustainability concepts into personal or professional metaphors rather than repeating institutional definitions.

- Collaborative Negotiation (Peer Interaction): Visible in embedded Canvas discussions where peer teams challenge assumptions, re-negotiate initial stances, and co-construct alternative approaches to real-world briefs before reaching the face-to-face studio.

- Applied Artifact Construction (Summative Synthesis): Visible when students integrate empirical evidence and theoretical frameworks into authentic client briefs, demonstrating how creative decisions (e.g., campaign narratives, strategic models, digital mockups) directly service sustainability outcomes.

To ensure creative work remains methodologically grounded, each summative task includes integrated iterative milestones. Prior to final submission, students post formative components (e.g., concept briefs, stakeholder maps, wireframes) for structured peer review, combining asynchronous Canvas critiques with live lecturer feedback. This dual feedback loop ensures continuous formative evaluation and transforms Canvas into an active, studio-based developmental space.

Course and pedagogical context

Sustainability & Creativity responded to two connected challenges. The first was conceptual: sustainability education can become abstract when disconnected from lived experience, creative practice, and local context. In Vietnam, where environmental education is often shaped by policy discourse and institutional framing, designing environments that foster critical interpretation and personal agency is vital (Pham, 2023). Positioning creative expression as a mode of learning addresses this directly; responding creatively requires students to interpret problems, take positions, and refine choices, deepening their connection to sustainability.

The second challenge was pedagogical. LMS use is often positioned as a content repository, ignoring its potential as an environment for creative engagement and social participation. The course design makes use of this potential, providing an active, collaborative, and supportive learning hub connecting learners and spaces. The Community of Inquiry framework positions meaningful learning as the interaction of teaching, cognitive, and social presence (Garrison et al., 2000), where students must negotiate differing viewpoints. Multimedia learning theory informed the intentional use of visuals and interactive diagrams to reduce cognitive load (Mayer, 2005). Social constructivism and problem-based learning shifted the focus from static definitions to active, collaborative investigation (Loyens et al., 2008; Vygotsky, 1978; Woods, 1994), while service learning anchored digital interactions to authentic industry partners in Vietnam (Tran, 2021).

Crucially, these frameworks do not operate in parallel; the digital environment synthesises them. Canvas preparation is structured as a collaborative group endeavour. Navigating modules in small, consistent peer teams, students co-construct meaning from the outset, with asynchronous multimedia modules acting as a low-stakes arena for debating concepts and building collective creative confidence. This digital rehearsal helps develop the sustainability competencies of normative judgement, systemic thinking, and interpersonal capability identified by Wiek et al. (2011) before students reach the face-to-face classroom.

Canvas as a creative learning environment

The Canvas design was structured around a weekly sequence of preparation, interaction, application, feedback, and reflection. To address the need for replicable design strategies in digital sustainability education, this sequence is formalised as a four-stage operational model (Stage 1: Encounter; Stage 2: Collaborative Rehearsal; Stage 3: Studio Application; Stage 4: Authentic Contribution). Table 1 below shows how design principles and learning tools were implemented to drive collaborative outcomes before face-to-face sessions.

Table 1.
Architectural model of the digital learning environment

Stage & Principle	**Digital Implementation**	**Sustainability Competency**	**Scaffolding & Milestones**
Stage 1: Encounter *(Multimodal access)*	Teaching narrative, and connecting content and activity: videos, case studies, H5P checks, and visual diagrams.	Systems-thinking: mapping complex drivers visually.	Approaches topics (e.g., greenwashing) visually, analytically, or conceptually, H5P for consolidation of key concepts.
Stage 2: Collaborative Rehearsal *(Low-stakes participation)*	Canvas discussions, in-page discussions, word clouds, and Padlet walls.	Interpersonal & normative: negotiating team perspectives.	Collaborative risk-taking in small, consistent peer teams without summative grading friction.
Stage 3: Studio Application *(Personal-to-professional & guidance)*	Integrated draft milestones per task; structured peer review in studio settings; mentor feedback.	Strategic competency: translating theory into action.	Trajectory from everyday lived experience to applied client briefs, milestone completion, peer critique quality, draft iterations.
Stage 4: Authentic Contribution *(Authentic application)*	Real-world client briefs (e.g., clean-tech startups, local NGOs).	Integrated problem-solving: applying creative agency to systemic issues.	Professional reports, digital mockups, client evaluation, awards/external adoption.

These low-stakes activities occurred within consistent, cross-disciplinary peer groups (e.g., pairing business and creative industries students) where learners negotiated ideas as creative rehearsal. Atomic discussions embedded conversations directly within content pages rather than isolated forums, mirroring real-world digital interactions and framing peer dialogue as a natural extension of the learning materials.

This personal-to-professional trajectory guided students from individual reflections on everyday experience (such as consumption habits or perceptions of local waste) toward collaborative analysis of real-world client briefs. A contemporary course shell replaced the cold administrative default typical of a standard LMS, providing a course look and feel reflecting the subject matter in a contemporary and playful way and more

importantly, a conversational, studio-mentor teaching narrative guiding students through the content and activities and modelling the interpretive, purposeful thinking students were invited to develop.

Assessment and authentic creative application

The course design scaffolded a sequence of authentic assessments positioning creative expression as applied professional practice: a critical analysis of a contemporary sustainability issue, a creative communication strategy for a client-informed problem, and an individual reflective project. Across deliveries, students worked with local sustainability organisations on plastic reduction, social equity, renewable energy, sustainable tourism, and upcycling. Illustrating this applied approach, a recent student group developed a full strategic consultancy report for Alterno, a Vietnamese clean technology startup developing sand-battery energy storage systems aligned with SDGs 7, 9, and 13. The project applied Moore's Technology Adoption Model to analyse market positions across Vietnam, Mongolia, and Japan, producing a SWOT/PEST analysis, go-to-market strategy, and platform concept that received the RMIT Student Award for Excellence in Sustainability.

Evidence of impact

Impact was evaluated across six deliveries (2022–2025) using a Design-Based Research framework combining Canvas analytics and Course Experience Survey (CES) data (Reinking & Bradley, 2008; Yin, 2018). This secondary evaluation utilised pre-existing, non-interventional quality assurance data; per institutional guidelines, formal ethics review was not required and data were fully de-identified, providing a robust multi-cohort baseline.

Page view activity for pre-class Canvas content was consistently the most accessed non-assignment activity across deliveries, with cohort participation in later deliveries reaching 90–100%. Participation in embedded Canvas discussions was the strongest predictor of student performance across the dataset: positive correlations were observed across five of six deliveries (excluding an early pilot due to inconsistent tracking), with statistically significant Pearson correlations in two cohorts showing early discussion participation strongly predicted final performance (reaching up to $r = .64$, $p < .001$). Because preparation was completed in peer teams, this relationship highlights the value of early-stage group cohesion, though correlation does not imply causation and highly motivated students may simply engage more across all components. Representative qualitative open-text responses were evaluated to contextualise student reflections on engagement and sustainability learning.

CES data suggests students experienced the design as accessible, engaging, and personally meaningful: overall satisfaction was high across six deliveries, reaching 100% in four. One student noted the course helped them consider both small personal changes and larger local, regional, and global sustainability issues. Another described viewing sustainability through multiple perspectives after learning alongside classmates from different disciplinary backgrounds. A third observed there was no sense of being judged (and no single right answer) while still feeling arguments needed to be grounded in evidence and logical reasoning. External recognition supports this: the course received three LearnX 2025 Platinum Awards (Environmental Education, EdTech Blended Learning, and Blended Learning Industry Specific), and the underpinning design work contributed to an Advance HE Global Impact Award, each connected to the creative expression framework described here.

Discussion: designing for creative expression in digital learning

Fostering creative expression in sustainability education requires treating creativity as an embedded mode of learning rather than an external final product. Far from mere preparation, asynchronous Canvas activities—such as composing interpretations or exposing design choices to peer feedback—acted as low-stakes creative acts that built the confidence and comfort with ambiguity needed for complex client tasks. By engaging creatively across multiple stages, students built their understanding of sustainability for increasingly consequential audiences.

Balancing structure and openness remained vital throughout; without conceptual scaffolding, creative output risks being expressive but superficial. Students required robust frameworks, formative checks, and explicit connections between their creative choices and sustainability evidence. Yet, openness was equally vital, as creative engagement cannot be fully prescribed. Students working on highly varied projects—ranging from plastic reduction and social equity to sustainable tourism and upcycling—operated within the same overarching design, but produced diverse responses shaped by their own contexts and ambitions. This has broader implications for digital learning environment design. LMSs should be understood as creative pedagogical spaces, not administrative containers. Multimodality offers more than visual appeal and engagement, allowing learners to make meaning through different representational forms and perspectives (CAST, 2018). Asynchronous group participation can function as creative rehearsal when embedded in the learning sequence and designed to reward interpretation and collaboration rather than recall or accuracy. Authentic, client-informed creative tasks help students understand sustainability as situated action in a field of creative professional responsibility rather than abstract concern.

Conclusion

Creative expression is most powerful in sustainability education when designed as an embedded mode of learning rather than a terminal assessment. Sustainability & Creativity demonstrates how Canvas scaffolds creative engagement through multimodal content, low-stakes participation, formative feedback, and authentic client-informed assessment. The course invites students to encounter sustainability creatively from first contact, build interpretive confidence, and apply creative judgement to real problems with real consequences. External awards and recognition suggest this approach has resonance beyond the course itself. Designing for creative expression in sustainability education means building environments in which different students from different backgrounds, disciplines, and professional aspirations can find a personally meaningful relationship to one of the most important challenges of their time.

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