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Empowering Educators: Building Competencies for Sustainable Futures

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ABSTRACT

This article builds on a keynote lecture by Professor Marco Rieckmann and situates Education for Sustainable Development (ESD) as a transformative framework for empowering learners to contribute to sustainable futures. It argues that achieving a "safe and just space for humanity" requires a profound shift in educational paradigms—from knowledge transmission to competence-oriented, action-based learning. The article outlines core sustainability competencies, reframes ESD as citizenship education that strengthens critical political agency, and highlights the importance of action-oriented pedagogies and the Whole-Institution Approach (WIA). Special attention is given to educator competencies, particularly within the "A Rounder Sense of Purpose" (RSP) framework, and to current research initiatives aimed at assessing action competence. The article concludes that empowering educators—conceptually, pedagogically, and institutionally—is the cornerstone of transformative learning and essential for embedding sustainability across educational fields, including physical education.

INTRODUCTION

The 21st-century challenge of fostering an environmentally sustainable and socially equitable world is increasingly framed through the concept of a "safe and just space for humanity," balancing human well-being with planetary boundaries Raworth (2017). While the UN Sustainable Development Goals (SDGs) provide a global roadmap for this vision, their realisation requires more than policy commitments: it demands profound societal transformation—and education is central to this transformation (United Nation, 2015).

Education for Sustainable Development (ESD) represents a fundamental reorientation of education's purpose. Rather than merely transmitting knowledge about sustainability, ESD seeks to empower learners to navigate complexity, critically reflect on values, and actively shape more sustainable futures. However, this transformative ambition cannot be achieved without empowering educators themselves.

This article argues that educator competence is the decisive leverage point for embedding ESD across educational systems. It explores key sustainability competencies, reframes ESD as citizenship education that strengthens political and structural awareness, and highlights the role of action-oriented pedagogy and the Whole-Institution Approach (WIA). In doing so, it outlines how education—and including fields such as physical education—can contribute meaningfully to sustainable futures.

PRESENTATION'S HIGHLIGHTS

Professor Rieckmann's presentation articulated a clear and compelling vision for ESD. The following sections expand on the key themes and arguments presented in the lecture, synthesising insights from the slide deck and accompanying summary document into a coherent written reflection.

2.1. THE CONCEPTUAL FRAMEWORK: DEFINING THE SAFE AND JUST SPACE

The presentation was grounded in the notion of a "safe and just space for humanity," a model visualising a zone for sustainable development between a "social foundation" of human well-being and an "environmental ceiling" of planetary limits (Raworth, 2017). The SDGs are presented as a practical, though imperfect, framework for navigating this space, highlighting key action areas and the complex trade-offs learners must analyse (United Nation, 2015).

Within this context, ESD is framed around three core aims. First, it is **future-oriented**, creating space for learners to imagine multiple possible futures. Second, it is **values-based**, facilitating critical discourse on social values without indoctrination. Third, it is **competence-focused**, empowering learners with the capabilities needed for sustainable transformations (Rost, 2002).

2.2. KEY COMPETENCIES FOR SUSTAINABLE DEVELOPMENT

The development of cross-curricular competencies is a cornerstone of the ESD paradigm. One influential framework is the model of "key competencies in sustainability," which identifies a set of interconnected, transversal competencies required for engaging with complex sustainability challenges (Brundiers et al., 2021). These include **systems thinking** (analysing complexity and interdependencies), **values or normative thinking** (negotiating sustainability-related values and trade-offs), **futures thinking** (developing and assessing alternative scenarios), **strategic competence** (designing transformative interventions), **implementation competence** (putting

sustainability strategies into practice and managing change processes), **interpersonal competence** (collaborating effectively and facilitating participation), and **intrapersonal competence** (self-reflection and the regulation of emotions and motivations).

Importantly, these competencies are not acquired through passive knowledge transmission. They emerge through active, iterative processes of analysis, visioning, decision-making, and action. Reflection and collaboration are essential components of this learning cycle, enabling learners to connect cognitive understanding with ethical positioning and practical engagement.

2.3. ESD AS CITIZENSHIP EDUCATION: BEYOND INDIVIDUAL CONSUMERISM

A critical argument is the reframing of ESD as citizenship education, challenging the narrative that sustainability is merely a matter of individual consumer choice. This narrow focus obscures the structural, political, and economic forces that constrain individual behaviour. ESD must therefore elevate learners from consumers to empowered citizens with critical political agency (Fedorchenko, 2021). It should equip them to understand and engage with the structural conditions and power relations underpinning sustainability challenges, fostering their agency as "sustainability citizens" (Rieckmann, 2020 ; Schank and Rieckmann, 2020). By shifting focus from individual behaviour to collective political action and structural change, ESD becomes a powerful tool for democratic participation (Rieckmann, 2018).

2.4. ACTION-ORIENTED PEDAGOGY AND THE WHOLE-INSTITUTION APPROACH

Cultivating these competencies requires a departure from traditional teaching. An **action-oriented transformative pedagogy** is needed—one that is learner-centred, participatory, and experiential (Unesco, 2017). This approach moves from teaching *about* sustainability to creating spaces where learners can *do* sustainability, developing competencies through active participation, reflection, and creation. Methodologies like design thinking and project-based learning are central to this.

Furthermore, ESD must extend beyond the classroom via a **Whole-Institution Approach (WIA)**, embedding sustainability into the fabric of the educational organisation (Holst, 2023). This holistic model integrates sustainability across curriculum, campus operations, governance, and community engagement. This approach acknowledges the power of the "hidden curriculum" of an institution's own practices. Empirical research confirms the efficacy of this model, with a large-scale German study showing a strong positive correlation between WIA implementation and key outcomes like empowerment and motivation for both students and educators (Holst et al, 2024).

2.5. EMPOWERING EDUCATORS: COMPETENCIES AND RESEARCH INITIATIVES

The success of ESD hinges on educator capacity. Expertise in sustainability is insufficient; specific pedagogical competencies are required. The "A Rounder Sense of Purpose" (RSP) framework, developed through an Erasmus+ project, outlines these essential competencies for educators: a critical

understanding of ESD concepts, a grounding in its pedagogy, and the ability to practice an action-oriented, transformative approach (Milican, 2022 ; Vare et al., 2022).[1]

To advance the field, two key research projects were highlighted. **Project Senatra** investigates how service-learning contributes to competence development and a WIA.[2] **Project Imp>Act**, a Horizon Europe initiative, addresses the critical gap in assessing learning outcomes by developing and validating an assessment framework for action competence.[3]

These initiatives demonstrate a commitment to building an evidence base for ESD, developing practical frameworks (RSP), exploring innovative pedagogies (Senatra), and creating reliable assessment tools (Imp>Act) to ensure a more rigorous and impactful implementation.

2.6. QUESTIONS AND ANSWERS

How can ESD avoid becoming a form of indoctrination?

This is a central concern in the field. The answer lies in the pedagogical approach. ESD is not about transmitting a fixed set of values or predetermined solutions, but about creating spaces for critical discourse and transformative learning (Rost, 2002). Educators should facilitate reflection on values such as resource conservation, human dignity, and justice, but they should not impose specific standpoints. Instead, learners are encouraged to develop their own positions through engagement with diverse perspectives and evidence. This process of critical value discourse allows for conceptual change over time, but it is neither guaranteed nor forced. The emphasis is on empowerment and agency, not behaviour control (Rieckann, 2018 ; Unesco, 2017).

Why is ESD framed as citizenship education rather than environmental education?

The shift from environmental education to ESD, and specifically to ESD as citizenship education, reflects a deeper understanding of the nature of sustainability challenges. Sustainability is not merely an environmental issue; it is fundamentally a social, economic, and political one. Individual consumer choices, whilst relevant, are often constrained by structural factors such as infrastructure, information availability, and economic systems. By framing ESD as citizenship education, the focus shifts to empowering learners to understand and engage with these structural conditions and power relations (Fedorchenko, 2021 ; Rieckmann, 2020 ; Schank and Rieckmann, 2019). This approach recognises students as "sustainability citizens" with the potential to participate in democratic processes and advocate for systemic change, rather than simply as consumers making individual purchasing decisions (Schank and Rieckmann, 2019).

[1] https://aroundersenseofpurpose.eu
[2] https://senatra-projekt.de/english
[3] https://impactforaction.eu

What is the role of physical education in ESD?

Physical education (PE) offers unique opportunities for ESD, though it requires a shift in pedagogical approach. Traditional PE is often "activity-oriented," focusing on participation in sports and physical activities. However, ESD calls for an "action-oriented" approach, where students are empowered to implement projects and initiatives that address sustainability challenges. This might involve designing and leading campaigns to promote active travel, collaborating with local communities to create green spaces, or exploring the connections between physical health, well-being, and environmental sustainability. The key is to move beyond simply doing activities to engaging in meaningful action that develops the full range of sustainability competencies.

How can educational institutions realistically implement a Whole-Institution Approach?

Implementing a WIA is a complex, long-term process that requires commitment at all levels of the organisation. It begins with a clear vision and strategic plan that articulates sustainability goals across all institutional dimensions: curriculum, operations, governance, and community engagement. Practical steps include appointing an ESD coordinator or sustainability officer, conducting an institutional audit to identify current practices and gaps, engaging stakeholders (students, staff, community partners) in participatory decision-making, and investing in professional development for educators. Crucially, the institution must be willing to model the values and practices it seeks to teach, recognising that the "hidden curriculum" of its own operations sends powerful messages to learners. The empirical evidence from large-scale studies demonstrates that this investment yields significant returns in terms of student and educator empowerment, motivation, and engagement (Holst et al., 2024).

What are the next steps for research in ESD?

The field is advancing rapidly, with several key priorities. First, there is a need for robust assessment tools to measure the development of action competence and other key sustainability competencies. Projects like Imp>Act are addressing this gap. Second, more research is needed on effective pedagogical approaches, including service-learning, project-based learning, and other forms of experiential education. Third, there is a need to understand how to scale up successful ESD initiatives and embed them within policy frameworks at local, national, and international levels. Finally, research must continue to explore the role of ESD in diverse cultural and educational contexts, ensuring that approaches are inclusive and responsive to local needs and priorities.

CONCLUSION

The imperative for a sustainable future demands a profound transformation where education is a primary catalyst. Professor Rieckmann's framework for ESD provides a compelling roadmap, beginning with the goal of creating a "safe and just space for humanity" (Raworth, 2017). This vision requires moving beyond passive knowledge transmission to an action-oriented, transformative

pedagogy that cultivates core competencies like systems and futures thinking (Brundiers et al., 2021). A pivotal shift is framing ESD as citizenship education, elevating learners from consumers to politically engaged citizens who can challenge structural barriers to sustainability (Fedorchenko, 2021 ; Rieckmann, 2020).

These innovations cannot succeed in isolation. The WIA provides a blueprint for embedding sustainability into the DNA of educational organisations, a model empirically linked to greater student empowerment and motivation (Holst et al., 2024). Ultimately, the success of this enterprise rests on educators. Empowering them with the competencies, tools, and support to facilitate transformative learning is the cornerstone of the entire strategy. It is through the empowerment of educators that we will empower a generation of learners to build the sustainable futures our world so urgently needs.

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