Transgressive learning in sustainability pedagogy: promises, risks, and responsible integration

Clément Lasselin, Stuti Haldar, and Jenny Iao-Jörgensen, *LTH/LU*

***Abstract*—Transgressive learning has gained scholarly interest as a way of enabling learners to question and defy norms that perpetuate unsustainability. However, transgression can also be risky and calls for responsible teaching able to identify and prevent such risks. This paper asks How transgressive learning can be responsibly integrated into sustainability pedagogy. It clarifies these risks of transgression and identifies six empirically validated transgressive competencies students should learn. Finally, it outlines pedagogical approaches for teaching these competencies more responsibly and effectively.**

***Index Terms*—responsible practice; sustainability pedagogy; Transgressive learning**

I. Introduction

TRANSGRESSION has often been discussed in relation to concepts like disruptions, resistance, and critical pedagogy [1,2,3,4]. It can be seen as a way of translating critical thinking and putting knowledge into action for sustainability. While this makes transgressive learning a potentially powerful tool to enable students acting in ways that improve sustainability, it also entails significant risks. Learners may face sanctions when defying established norms. The act of transgression may also be ill-grounded or counter-productive. Teaching transgression also presents a paradox, as education takes place within institutions that tend to prize adherence to established norms, e.g., respect for established knowledge and teacher authority. Yet, transgressive learning requires learners to question and defy these very norms. Although such paradoxes are well-known in broader educational theory (e.g., [5]) they have not been extensively studied in the context of sustainability pedagogy. This paper seeks to address this gap by asking: How can transgressive learning be responsibly integrated into sustainability pedagogy? To answer this question, Section II examines benefits and risks of teaching transgression. Then, Section III presents six so-called transgressive competencies students should learn to overcome their risks. Thereafter, Section IV outlines a pedagogical framework for how teachers can enable students to acquire these six competencies.

The paper relies on synthesized results from a short survey with teachers from Lund University sustainability education programs, and a workshop with students. Regarding the survey, it was sent out in October 2025 to current and alumni of the Teaching in Sustainability Education from Lund University Faculty of Engineering (LTH), as well as teachers from the Lund University Center for Sustainability Studies (LUCSUS), Centre for Innovation Research at Lund University (CIRCLE), Department of Human Geography (KEG), and other university networks of the authors. The respondents included teachers from disciplines including engineering, sustainability studies, human geography, human rights and law, and environmental sciences. Respondents' teaching experience ranged from 0 to 20 years, with an average of approximately 9 years—including both early-career and highly experienced educators—, offering a diverse perspective on the integration of transgressive competencies in pedagogy. The workshop with students is planned for 27 November and results will be shared at the Conference.

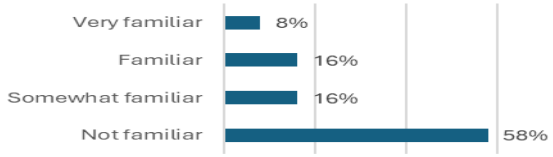

Fig. 1. Levels of familiarity among survey respondents about the concept of transgressive learning.

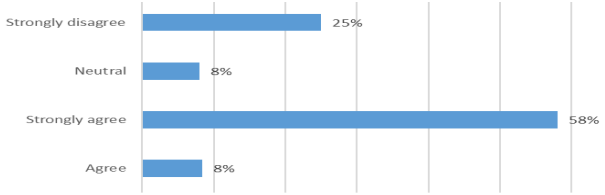

Fig. 2. The extent of agreement among survey respondents with the statement "Encouraging students to challenge dominant norms is essential for advancing sustainability".

II. Transgression: Benefits and Risks

In a world shaped by norms that are inefficient or even counterproductive to sustainability, teaching transgression may help students learn how to defy norms when these perpetuate unsustainable practices (e.g., fast fashion, fossil fuel-based energy consumption). The concept of transgressive learning has been explored as a pedagogical

Clément Lasselin (email clement.lasselin@tg.lth.se) is a postdoctoral researcher at the Division of Engineering Geology, LTH.

Stuti Haldar (email stuti.haldar@design.lth.se) is a postdoctoral researcher at the Centre for Innovation Research (CIRCLE), & Department of Design Sciences.

Jenny Iao-Jörgensen (email jenny.iao-jorgensen@keg.lu.se) is an Affiliate Lecturer at the Department of Human Geography, LU and the Division of Risk Management & Societal Safety, LTH.

response to the impasse of conventional sustainability education, which often fails to challenge the systemic roots of unsustainability. This form of learning can expose how dominant ways of thinking and acting upon the world might reinforce unsustainability through unintended impacts on societies and the environment. These benefits are particularly important to highlight as transgressive learning, although useful, does not seem to be a widespread pedagogical framework. There are not many articles published on the topic. Empirically, while 58 percent of the survey's respondents are teaching sustainability in their respective disciplines, they reported not being familiar at all with transgressive learning (see Fig. 1). Simultaneously, 66 percent respondents agree or strongly agree that challenging dominant norms is essential to advance sustainability (see Fig. 2).

Nevertheless, teaching ways to transgress for improving sustainability comes with risks—some of which has already been highlighted in the context of sustainability transformations [5]:

- *Norm misassessments*. Students may misinterpret the unsustainability of the norms to be transgressed.
- *Transgression impacts misassessments*. Students may not foresee or understand all the impacts of transgression, thereby risking doing many harms.
- *Transgression comparative misassessments*. Students may develop biases by failing to compare different possible pathways for transgression—such as collaborative problem-solving, policy advocacy, or technology-based interventions. Consequently, they may overuse transgression, e.g. by defying safety protocols in labs.

These risks may occur as assessing the impacts of transgression may be further complicated by the complexity of social systems. These systems have many interdependent parts and the outcomes, shaped by multiple actors and their interactions, are difficult to predict and measure.

Survey results show that more than half of the respondents were unaware of the concept of transgression, and one-fourth viewed encouraging students to challenge dominant norms negatively. Several participants highlighted cultural variability, noting that what counts as transgressive differs across contexts, particularly in international classrooms. Others mentioned political and emotional sensitivities, describing such teaching as "more political than scientific." Structural barriers—rigid curricula, limited resources, and few peer-learning opportunities—further constrain experimentation, while external pressures like students' employability concerns may discourage critical engagement with dominant sustainability narratives (Primary survey, 2025).

III. Six Essential Competencies

Building on the highlighted risks of teaching transgression, this section proposes six transgressive competencies that students need to engage with transgression responsibly:

1) *Assessing the sustainability of norms*: Students must learn to identify which norms contribute to unsustainability and which remain important to respect. This should enable them to prioritize the transgression of harmful norms while upholding those still necessary for sustainability.
2) *Acknowledging the possibility of transgression and identifying the different types of transgression*: Students should be taught the different types of transgression, ranging from moderate (e.g., civil disobedience) to more radical (e.g., sabotage), and from individual to collective actions. Each type carries distinct risks, social mechanisms (e.g., legal challenges, advocacy campaigns), and may generate further counter-normative actions.
3) *Identifying several transformative pathways*: Transgression may not always be the most effective approach to fostering sustainability. Students must learn to identify it alongside several other pathways (e.g., collaborative problem-solving, policy advocacy, or technological innovation).
4) *Evaluating and comparing transgression impacts across scales*: Students must learn to assess the impacts of transgression—and potential alternative pathways—at different spatial and temporal scales. This includes weighing immediate versus long-term consequences and local versus broader effects.
5) *Identifying and adapting to uncertainties*: Because social systems are complex and all the outcomes of transgression are hardly predictable, students must learn to characterize levels of complexity of the systems in which they get involved, identify uncertainties related to potential transgressions, and adopt precautionary measures. This requires associating states of knowledge and uncertainties to relevant precautionary measures.
6) *Practicing transgression responsibly*: Students must learn to associate the knowledge and theoretical competencies mentioned above to practical competencies, applying all these insights. This means being able to act on one's evaluations, and developing the courage to face possible negative outcomes—provided they have been carefully assessed before. This also means being able to quickly adapt actions to (mostly unpredictable) reactions of social systems, without constantly re-assessing all actions once involved in active transgression. This in turn requires keeping sustainability in mind, to avoid being carried away by a sense of boundless power.

Together, these six dimensions form a skillset that combines knowledge with theoretical and practical competencies, that enables students not only to consider whether to transgress, but also how to do so responsibly.

Survey results show a consistently high valuation across all six transgressive competencies. Identifying norms that enable or hinder sustainability scored highest (Mean = 4.92; 100%), confirming its centrality to transformative pedagogy. Understanding transgressive types and assessing them with alternative approaches also rated highly (Mean ≈ 4.3–4.4; >90%), while considering effects across scales scored slightly lower (Mean = 4.17; 75%). Ethical engagement and adaptive responsiveness (Mean = 4.5 each) highlight awareness of relational and contextual aspects. Respondents stressed that these competencies should be learned together: "[...] all competencies are equally relevant and part of the same package" (R6, 2025).

IV. Teaching Transgression Responsibly

As teaching transgressive competencies is about teaching certain forms of knowledge and bringing together theoretical and practical competencies, it requires a multi-pronged pedagogical approach.

- *Evaluating theoretical competencies*. Teachers must evaluate students' knowledge and theoretical capacity to identify and assess normative contexts and their complexity levels, transgression possibilities, and other pathways.
- *Evaluating practical competencies*. Teachers must evaluate student's practical competencies to act in accordance with these assessments and to adjust their actions depending on new practical inputs. This calls for integrating assessments with practice through context-specific exercises like role-playing and simulation exercises, and concrete case-based problem-solving indeed including service-learning projects, real-world problem-solving collaborations, living labs, and experiential outdoor learning.
- *Accepting co-learning situations*. As our survey results show, teachers may not be familiar with transgressions themselves. They should therefore position themselves as co-learners, seeking to co-construct courses or lectures that draw from diverse students' perspectives while developing their own transgressive competencies themselves. Even if teachers are more knowledgeable about the subject, involving external actors like NGO actors, particularly during practice-oriented exercises can more effectively demonstrate transgression in action and highlight real-world constraints.
- *Being cautious in teaching*. More broadly, it is important that the teacher do all of this in a sustainable manner. It is particularly important, when it comes to transgressive competencies, not to rush the students in one direction or the other: they must not be made to overestimate the value of transgression and thus take decisions based on unconsidered risks; but they must also not be taught transgression at all costs, notably if they perceive them as threatening or inappropriate [7].
- *Setting the example*. Also, teaching transgression competencies may even require the teacher to apply such competencies very directly, as the teacher may encounter resistance from other teachers and educational institutions to the idea that they are teaching transgression [8].

V. Conclusion

This paper argues that transgressive learning offers valuable opportunities for advancing sustainability education but also entails significant risks. It identifies six key competencies for learning about transgression and proposes pedagogical approaches for teaching them. Empirical findings demonstrate both the framework's potential and its limits. By addressing the benefits and risks of transgressive learning and testing these approaches, the paper advances understanding of how it can be integrated into sustainability pedagogy. Future research should explore how these competencies develop across contexts and how institutional conditions enable or constrain teaching transgression, as conceptual clarity, organisational support, and safe learning spaces remain essential.

Acknowledgment

Thanks to all the survey participants who have generously contributed to this study.

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