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Learning for sustainability: partnerships for the goals

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Learning sustainability

Partnerships between scholars and society must become a foundation of learning (including life-long learning) and teaching practices if the world is to achieve the 17 United Nations Sustainable Development Goals (UN SDGs). As recognised by SDG 4 (Education for all) and Article 12 of the UN Framework Convention on Climate Change (UNFCCC) landmark Paris Agreement of 2017, which states "*Parties shall cooperate in taking measures, as appropriate, to enhance climate change education, training, public awareness, public participation and public access to information*", education at secondary, post-secondary, and life-long learning venues is vital to addressing sustainable development and the climate crisis [9]. However, to simultaneously drive sustainable transitions and confront social inequities on a global scale, education must be solutions-focused and co-designed with communities and partners beyond traditional classrooms. The education needed to address the global climate crisis cannot be delivered by one discipline, sector, industry, or country alone [4]. Since the purpose of the SDGs is to highlight the interconnected and multicultural nature of sustainability themes and thereby encourage cooperative global and cross-sector action, institutions of learning must look beyond their own walls to bring these principles into educational programming.

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The article collection, *Learning Sustainability, Partnership for the Goals,* focuses on exploring pathways to implementing 'Partnerships for the Global Goals' (SDG 17) within learning communities. Sustainable Development Goals SDG4 (Quality Education), SDG5 (Gender Equality) and SDG17 (Partnerships for the Goals) provide a roadmap to "*strengthen the means of implementation…*", via a combination of both disciplinary training, "*…voluntary multi-stakeholder partnerships…*", while "*…securing equal participation and opportunities for leadership for women and girls*" and real-world curriculum to prepare our students for the implementation of international goals. SDG 17 recognizes the need to be "*supportive, empathetic, inventive, passionate, and above all, cooperative*", while SDG4 focuses on "*…public awareness, participation and access to information*" and SDG5 embraces gender equality [6]. To secure Earth's life support systems and ensure human well-being, SDG17 and SDG4 call upon universities to build and enhance partnerships with diverse stakeholders. As the UN, governments, civil society, and industry increasingly recognise the significance of cross-cultural and cross-sectoral collaboration in forging pathways to societal transitions, the academy must adapt parallel themes in education design and delivery [6].

Implementing the needed change

The values and principles of SDG 17 (Partnerships for the Goals) are discussed and applied widely among local governments, UN, and in the corporate world, yet they are rarely included explicitly in higher education curricula. Whilst traditional sustainability education is evolving to become interdisciplinary within institutions, emphasizing greater equity across gender,

socioeconomic status, and cultural origins [1], tackling the global challenge of climate action requires the addition of much broader partnerships with diverse stakeholders outside higher education (Fig. 1).

Authentic learning is one core approach whereby students work on real-world problems to develop useful skills relevant to their current and future lives beyond university and outside institutional learning structures (beyond the classroom) [5]. All learners should have the opportunity to be immersed in authentic collaborations with a diversity of stakeholders across social and international boundaries. To provide this access, efforts must be taken to forge and maintain educational partnerships with industry, government, the UN, startup and established businesses, and non-profit-organisations to enable the co-development and curation of experiences that are agile, relevant, and robust to a rapidly changing world. In practice, translating these lofty aspirations to real-world settings is difficult; educators are challenged by workloads, competing priorities, and an absence of models or guides to the broad world of multi-dimensional partnerships. A valuable approach is the active and frequent incorporation of a diversity of industry and community stakeholders into the classroom. Ideally, these stakeholders should be active co-developers of curriculum materials along with the traditional and local community-based knowledge holders and custodians of relevant learning activities and practices. For example, educators can teach *with and for*, rather than *to*, local councils, Indigenous communities, and industry partners. A transition to ongoing, active engagement will ensure our curriculum remains relevant to contemporary issues, inclusive of diverse voices, and responsive to emerging local to global climate implementation needs.

In addition to the enhanced learning of "content" through exposure to a broad array of stakeholders, partnerships powerfully accelerate building of learners' agency and citizenship for sustainable development through concomitant socio-emotional and behavioral learning [2]. This aspect of partnerships is particularly important given that higher education institutions remain content-focused, particularly in STEMM disciplines; we know that facts and data alone are inadequate to drive individual and collective action. Partnerships allow educators to understand community or broader societal needs and moreover, to form educational cross-sector communities of practice, expanding their understanding and capability across boundaries of pedagogy, discipline, and sector [3].

Roadmaps for capacity-building education

Sustainable Development Goals 4, 5, and 17 all include targets for capacity-building and access to information, and call on universities to be cornerstones of research, innovation, and quality education for all, including women and girls (SDG4 and 5). Education developed and delivered with and for organisations and communities is a pathway to building capacity and public awareness within our global workforce and society. Capacity-building is defined by the UN [8] as "*the process of developing and strengthening the skills, instincts, abilities, processes and resources that organisations and communities need to survive, adapt and thrive in a fast-changing world*". Today's employers almost universally demand adaptable lifelong learners who can use their disciplinary training

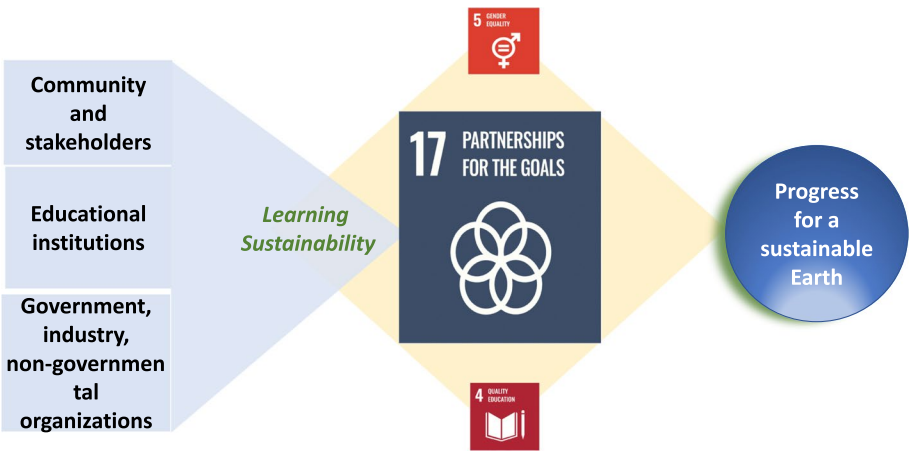

Fig. 1 Learning Sustainability through Partnerships for the Goals generates cross-sector communities of education practice that develop learners' agency to take individual and collective action for sustainable Earth. These partnerships can increase immersive learning opportunities, increase the authenticity, relevance and agility of curricula, and support socio-emotional, behavioral and cross-cultural learning, for climate action outside of the classroom

in diverse contexts, whilst adapting to change and driving innovation, and include a diversity representative of the global workforce. There is a need to build capacity across the lifecycle of innovation from research to ideation, prototyping, human-centered design, business development and implementation, with adaptability to unknown future industry trends. Working with external stakeholders fosters the multi-directional exchange of information and trust for long-term relationships, which can further provide insight into emerging skills gaps and new workforce sustainability challenges relevant to both students and faculty. Thus, trust-building can become a virtuous cycle. Trust is required to underpin the business development necessary to offer more educational experiences that support industry and community partners whilst simultaneously immersing students in contemporary real-world problems and settings to ensure the development of useful skills [7].

Partnering for education

As part of an article collection focused on *Learning Sustainability*, we articulate three principles to frame and conceptualize the value of further embedding Partnerships for the Goals as a foundation of sustainability learning in Higher Education:

1. Prepare a future workforce representative of global cultural diversity and balanced by gender that collaboratively and actively participates in partnerships for sustainability across all sectors.
2. Create industry/student/academic collaborations that incorporate agile and relevant curricula responsive to a rapidly changing world and work environment.
3. Recognize that future workforce needs are ever changing in an increasingly connected global economy, evolving at a pace forcing a constant and rapid development of new skills and agility to address future needs that have yet to be fully articulated.

Learning Sustainability; Partnership for the Goals is a collection of papers with the overarching theme of learning and partnerships in educational instruction through the lens of 1) local to global government and policy makers; 2) industry and non-profit corporations; and 3) youth and the academy. Interwoven throughout the topics presented, are the concurrent issues of quality education for life-long learners that is balanced by the cultural and gender equality goals needed for global society. For example, the World Economic Forum's top ten skills speak to adaptability, and the ability to seize the opportunities of constant disruption [10] and "T shaped professionals" who are capable of dynamically responding to complex and changeable societal challenges across social, political, and industrial interfaces. Learning sustainability is a process that evolves with the increasing challenges of balancing people, economics, and the environment under a globally changing climate.

The time is urgent with the emerging climate crisis! Youth and student engagement in learning sustainability and practicing solution-focused leadership is urgently needed across all sectors of society [3]. Most students would miss opportunities to get involved in solutions to the climate crisis without proactive engagement of educators with industry leaders, not-for-profit and other stakeholders engaged in sustainable development actions worldwide. *Learning Sustainability*, as expressed in this collection, is a nuanced objective that embraces multicultural stakeholders and other knowledge systems within the discipline structures realm of academia and educational curriculum. The selected papers highlighted in the collection explore new approaches to learn sustainability from a variety of perspectives from academics, youth voices, and industry. Learning sustainability through partnerships is a critical next step as the world looks towards global goals as part of the solutions needed to address the climate crisis.

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Declarations

Competing interests
The authors declare that they have no competing interests.

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