

Perspective

Achieving the Sustainable Development Goals through Company Staff Vocational Training—The Case of the Federal Institute for Vocational Education and Training (BIBB) INEBB Project

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Abstract: Education for sustainable development (ESD) plays a significant role in achieving the 17 Sustainable Development Goals (SDGs) and simultaneously tackling the current global ecological challenges. Integration of ESD in Vocational Education and Training (VET) offers opportunities for private sector actors to contribute to reaching these global goals. The dual structure of business-integrated training in Germany further exemplifies a business case and the numerous opportunities available to private companies for engaging with the SDG framework. This briefing paper highlighted available evidence from the ESD literature on VET skills development in advancing the SDGs. Outcomes from best practices were based on the tried-and-tested länder—federal states—piloted vocational training of the Federal Institute for Vocational Education and Training (BIBB) INEBB1 project (INEBB), demonstrating the conditions necessary for vocational education training in sustainability and plausible transfer mechanism within companies. These conditions included (1) the application of deductive concepts, (2) the establishment of blended-learning platforms (place-based and digital), and (3) the adaptation of the criteria and contents from the German Sustainability Codex (DNK) in curriculums designed for the training. This innovative vocational course and certification as specialist training for sustainable development was a model case in bringing the SDGs closer to German companies' vocational education. INEBB2 sought to upscale applicable and task-based instructions from the experimented model project INEBB1 within different companies through regional, lateral, and vertical transfer strands. The INEBB project model in the review suggested there was a need for further empirical work and policy discourse on educational transfer research in the framework of VET for sustainable development. The INEBB project model integrated the new standard occupational profile items of the environmental protection and the sustainability and digitalised world of work across occupational competencies in the German dual system of vocational education and training that will come into force in August 2021 for all 326 dual training professions.

Keywords: Sustainable Development Goals (SDGs); German Sustainability Codex (DNK); Vocational Education and Training (VET); Transfer Research; German companies

1. State-of-the-Art Literature on Scientific and Policy Evidence in Education for Sustainable Development

Twenty-first-century societies are facing the challenge of having to rapidly transform towards sustainability while balancing complex trade-offs between their ecological, social, and economic needs [1]. Education for sustainable development (ESD) is a recognised academic field in education research and practice, which gained much traction in recent decades as a vehicle for reaching the 17 Sustainable Development Goals (SDGs). Both in scientific and policy discourse, the concept found relevance as it addresses current pressing

global challenges such as the climate and biodiversity crisis caused by human economic needs [2].

The ESD field, first and foremost, considered didactic contents and outcomes; pedagogy and importance of the learning environment; and integration of contents such as climate change, human and employees' rights, and sustainable consumption into curriculums, resulting in interactive and learner-centred education settings. ESD further required a rapid shift from teacher-centred to learner-centred approaches with task-based instruction, problem orientation, inter- and transdisciplinarity, and the use of digital tools and approaches in the development of required competencies for promoting sustainable development [3,4].

Available scientific and policy evidence on strategies to reach these global development goals promoted education in all its forms. The SDGs-targets 4.7 and 5.5 advocate that, by 2030, all learners would have acquired the knowledge, skills, and attitudes needed to promote sustainable development through, for example, education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development [5]. The United Nations affirmed the critical role of education for sustainable development (ESD) for reaching the SDGs and recommends key cross-cutting competencies needed in educational training [6].

ESD enabled individuals and companies to contribute to these goals by promoting societal, economic, and political change. Transforming current business as usual (BAU) behaviours was necessary since they undermined the principles of complementarity between people, profits, planet, peace, and partnerships (5 Ps) as showcased by the recent works of [7], assessment of the normative dimension of sustainability. ESD empowered citizens in terms of informed decision-making, thus facilitating responsible local and global actions that reflected social and environmental integrity, as well as economic viability for the sake of present and future generations.

The overall goal of ESD could be summed up as being able to develop cross-cutting sustainability competencies in learners and produce specific cognitive, socio-emotional, and behavioural learning outcomes that enabled learners to deal with the particular challenges of each of the SDGs, and, therefore, guaranteeing their achievement in the long term.

Integrating ESD in Vocational Education and Training (VET) was highly strategic and offered a myriad of opportunities in reaching the SDGs [8,9]. Labour market developments of the 21st century were centred on new processes and services that required specialized knowledge and skills not yet available in general education institutions and practices. The global urgency for sustainable development directly proposed a need for a labour force with skill sets that made it possible to establish and sustain new environmental industries, services, and practices [10]. To respond to this emerging labour market, VET skills development programmes were imperative.

The SDGs place priority on strengthening the relevance of Vocational Education and Training. SDGs 4, 5, 6, 8, and 13 all have specific targets focusing on the critical role VET plays in securing these global goals. The call on VET institutions to provide a skilled labour force must therefore not be underestimated, as such a workforce is a prerequisite to meeting some national SDG commitments.

Two specific targets in goal 4 pertain to VET. Target 4.4 calls for a substantial increase, by 2030, in the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs, and entrepreneurship. Target 4.7 stipulates that education needs to include the knowledge and skills all learners need to promote sustainable development. At least one target in each of the other goals involves learning, training, education, or raising awareness. Given its inherent combined training, apprenticeships, and formal as well as informal programmes, VET could contribute significantly to obtaining the sustainable development goals by virtue of its holistic and transformational approach to education.

To date, most published reviews and policy briefs on education for sustainable development provided little evidence on the role of VET in companies' education and training and how this could address challenges faced in achieving the SDGs.

Private companies and enterprises in Germany featured and partook in the implementation of the SDGs in different ways. For example, impact investments from companies as a business strategy filled global funding gaps in financing these goals, and the increased public demand for corporate sustainability reporting influenced the way companies act and behave. Companies consequently recognised the strengths and opportunities in investing meaningfully in their employees' training as a long-term labour investment strategy that offers a competitive advantage on the market.

Small to medium-sized enterprises (SME) increasingly witnessed society's demand for greater social and environmental sustainability and responded with new pedagogical approaches to training employees with a focus on not only profit-normative goals but also on social and environmental goals.

The dual training system in vocational education was firmly established in the German education system [11]. The main characteristic of the dual system is the cooperation between companies and publicly funded vocational schools. This system was globally appreciated in the VET literature, and the training is characterised by a strong theory and practical orientation in a real-life work environment and is often considered as one relevant option to reaching the SDGs and tackling unemployment rates and high skill gains.

2. Bringing Sustainable Development into Company Vocational Education and the Training-INEBB Project Case

The briefing paper shed light on the INEBB2 vocational education transfer project, which drew on useful lessons learned from the INEBB1 pilot project. Such innovative concepts adapted in the BIBB project could complement German companies in scaling up efforts to achieve the SDGs via the scheduled didactic structures, curriculums developed, and blended-learning approaches in vocational training projects.

The INEBB1 project was developed as an advanced training programme including a curriculum and a certification process by the German Chamber of Commerce and Industry (CCI). The project was funded within the framework of the UNESCO World Action Programme on education for sustainable development (GNI) by the Federal Ministry of Education and Research (BMBF) through the Federal Institute for Vocational Education and Training (BIBB) as the project execution organisation. The BIBB acted as a government-funded scientific body that supported and coordinated the development of educational fields within vocational education and training in Germany. Target groups included training staff in occupational, vocational training (e.g., entrepreneurs and business owners, human resources managers) within foreign trade, wholesale, and retail in the model region of Saxony-Anhalt.

The focus of such a vocational education programme was to empower in-company training staff to impart the skills of sustainable development within respective companies and beyond.

Tested didactic concepts and curricula developed experimented with company employees who served as trainers in company professions. The basis and foundation of these training were enshrined in the 20 criteria in the German Sustainability Code (DNK).

The three pillars of sustainability underpinned the theoretic focus within the project. First: global justice; second: environmental safety; and last but not the least: sustainable economic development. This was complemented by the components of sustainable development: participation, culture, and balance-orientation introduced and incorporated into the training by the German Federal Association for Sustainability [12]. The aim was to identify global challenges and their interdependencies, providing concrete examples that illustrated how a solution-oriented approach could optimise the effect of one's own actions. Company-trained employees were eventually awarded the CCI course certificate of training specialist for sustainable development. Successful implementation of the INEBB1 project was partly due to the diverse strategic and practised partners and beneficiaries

from different companies (small and medium firms) and the strict adherence to the BIBB guidelines regarding deductive VET for Sustainable Development. The German UNESCO Commission (DUK) eventually awarded the INEBB1 within the networks category for deepening the understanding of sustainability through interdisciplinary programmes and research and the project's outstanding commitment to ESD.

Based on these achievements and successes chalked, the INEBB2 transfer project (2020–2022) was developed to serve as a further training platform for the private sector and a successor to the piloted INEBB1 project. The INEBB2 aimed at the adaptation of the already developed curriculum and the transfer of sustainability modules into diverse firms and further integrating large private sector stakeholders and company networks with a larger reach.

Partners in this new further education and vocational training programme included the German Federal Association for Sustainability (Berlin) with a coordination responsibility, VAUDE Sports (Tettwang), comkomm Company Communication and Brand Management (Berlin), the chamber-of-commerce-and-industry project company (Frankfurt/Oder), and the University Bonn-Rhein-Sieg (St. Augustin) with support from the German Business Ethics Network, the partnership for Further Education of the CCI Bonn/Rhein-Sieg, and the CCI Education Academy (Magdeburg). Broad partnerships in the project allowed the implementation of the various transfer models designed with the rationale of reaching a wider network of private sector actors in the market.

The innovative vocational education and training to be transferred within the project sought to upscale applicable and task-based instructions from the experimental model project INEBB1 within different companies in the länder—federal states. Successful dissemination and long-term establishment of the INEBB education and training were achieved through the so-called regional, lateral, and vertical transfer strands, with special consideration of the new standard occupational profile items of the environmental protection and the sustainability and digitalised world of work. Two distinct project transfer strands (regional and vertical) were complemented by the joint lateral transfer (digital competencies and adaptation for other occupational groups and industries). As a contribution to education and transfer research, the project sought to identify success factors of different transfer models and to analyse and evaluate different strategies and methods in the scaling up of training within companies.

Necessary conditions for the realisation of a transfer of modules in companies included the provisioning of a blended-learning format, integration of further training on at least one private sector platform, inclusion in training programmes of two (2) to three (3) CCIs, selection and training of a pool of experienced lecturers, an attractive pricing offer for company employees, and long-term establishment of permanent learning structures on VET platforms on the SDGs in Germany. These training platforms could serve as a reliable offer to German companies interested in meeting the SDGs through staff training capacity building. Central to all these was the assurance of broad scaling up made possible by a strong network and associated partners within the project.

3. Conclusions

Reaching the 17 Sustainable Development Goals (SDGs) and finding long-term solutions to current global ecological challenges are high on the agenda of several private actors and enterprises—these include governments and businesses around the globe. State-of-the-art literature and evidence in education research showed that effective integration of education for sustainable development in VET is integral to addressing global challenges actionably.

However, learning concepts, processes, and practices of ESD were used in addressing the SDGs to highlight complexities, discrepancies, and deficits in curricula. Validated methods for the transferral and efficient scaling up of modules within companies, therefore, ought to be further researched and optimised.

In this short paper, our aim was to review the available evidence on ESD integration within VET and the SDGs and, specifically, highlight the role of the German dual training system using company vocational education training as a business case for scaling up the efforts to achieve the SDGs.

The authors concluded that VET in companies, if properly designed, implemented, and evaluated with all relevant actors and some necessary conditions adapted, i.e., didactic concepts, DNK-based curriculums, blended-learning formats, task-based instruction approaches, and abiding by the standard occupational profile items, these conditions could enhance effective and efficient vocational training in companies. These conclusions drawn were based on the INEBB model case and cannot be generalised as such. Further research is needed in the transfer of skills and best practices identified from different case studies to be able to make such generalisation.

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