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## **Teachers as Change Agents: Embedding Global Citizenship and Sustainable Development in Teacher Education**

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### **Abstract**

In order to solve important social, environmental, and economic problems by 2030, the United Nations presented Sustainable Development Goals (SDGs). It was to be a transformative global agenda. Since teacher education is at the top of this mission, they are both sources of knowledge and agents of social change. However, in many cases, the teacher education programs are not fully aligned with the SDGs in their teacher education curriculum. Therefore, it fails to prepare educators with knowledge, teaching strategies, and values to equip them to teach the future generation. This paper aims to investigate the amalgamation of SDGs into teacher education curricula. The focus is on preparing educators for global citizenship. Drawing on a qualitative case study approach involving pre-service (n = 15), in-service teachers (n = 10), curriculum developers (n = 4), and teacher educators (n = 8), the research investigates current practices, challenges, and opportunities in embedding the SDGs into teacher training programs. Data were collected through semi-structured interviews, focus groups, and curriculum document analysis, and were analyzed thematically. Findings reveal that while awareness of SDGs among teacher educators is generally high, their practical integration into curriculum design and pedagogy remains inconsistent. Common barriers include curriculum overload, limited institutional support, and inadequate training in interdisciplinary and participatory teaching methods. Nevertheless, a few innovative practices demonstrate the potential for teacher education programs to act as incubators for sustainability-driven pedagogy. The paper argues that meaningful integration of SDGs requires a systemic approach involving policy alignment, professional development, curriculum redesign, and assessment reform. Recommendations emphasize the integration of Sustainable Development Goals (SDGs) as core learning outcomes within teacher education curricula. By equipping prospective educators with the requisite competencies, dispositions, and global perspectives aligned with sustainable development. Teacher education institutions can play a transformative role in advancing the SDG agenda and cultivating learners who embody the principles of responsible and engaged global citizenship.

**Keywords:** Curriculum Integration, Education for Sustainable Development, Global Citizenship, Sustainable Development Goals, Teacher Education

### **Introduction**

The 21st-century education system has a two-fold responsibility: one to make sure that the contextual needs are met, and secondly, to address the global issues, which include climate



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change, inequality, poverty, and environmental degradation (UNESCO, 2021). To meet this emergency, 17 Sustainable Development Goals (SDGs) were agreed upon in 2015, when the United Nations adopted the 2030 Agenda for Sustainable Development (UNESCO, 2021). The Agenda for Sustainable Development, especially Target 4.7 under SDG 4, emphasizes that education systems should help all learners gain the knowledge and skills needed to promote global citizenship, support sustainable development, and value cultural diversity (UNESCO, 2017). Teacher professional Development has a very pivotal role to play, as teachers, besides teaching the content, are also to reinforce problem-solving, attitudes, and values in the future generation. Hence, instead of considering the integration of SDGs in the teacher development program as an optional advancement, rather it should be viewed, as a critical need for nurturing a generation ready to take on today's pressing sustainability challenges (Leicht et al., 2018). Equipping teachers for universal social responsibility involves nurturing key competencies such as critical thinking, intercultural understanding, ethical decision-making, and the ability to connect classroom learning with the wider sustainability challenges faced in the real world (Wals & Benavot, 2021).

### **Gaps in Teacher Education Curricula**

Although the Sustainable Development Goals (SDGs) are widely emphasized in international policy, their integration into teacher education remains uneven (Aznar et al., 2018). In many cases, sustainability is addressed superficially, as curricula are still heavily shaped by subject-specific and content-driven traditions (Fiel'ardh et al., 2023; Rieckmann, 2018). Courses on civic engagement and environmental education do exist in universities, but they are often positioned as optional electives rather than embedded in the core structure of teacher preparation programs. Hence, it's the responsibility of the teacher education universities to ensure its integration in the teacher education programs (Liu & Kitamura, 2019) Additionally, teacher educators themselves might not be trained in sustainability pedagogy, which would hinder their capacity to effectively mentor and model for aspiring teachers (Fiel'ardh et al., 2023).

### **Global Citizenship as a Pedagogical Imperative**

Fostering students' understanding of global interdependence, respect for diversity, and responsibility for a more just, peaceful, and sustainable world are the key goals of global



citizenship education (GCE) (Wals & Benavot, 2021). This approach is part of SDG 4.7 (UNESCO, 2017). Hence, to engage students in experiential learning, group problem-solving, and community-based sustainability projects, educators must go beyond what is taught in textbooks (Edwards et al., 2020). However, strict institutional frameworks, resource limitations, and conflicting policy priorities frequently impede the integration of GCE principles into teacher education curricula (Bourn, 2020).

### **Significance of the study**

The importance of this study lies in integrating SDGs into teacher education, aligning with the global shift towards Education for Sustainable Development (ESD) and competency-based curricula. It investigates how teacher training programs can embed SDGs not only as thematic topics but as fundamental values that influence teaching methods, assessment, and professional identity. The research covers both pre-service and in-service teacher education, highlighting that sustainability skills must be cultivated throughout a teacher's career.

By exploring existing practices, challenges, and innovative approaches, this research contributes to policy and curriculum development strategies aimed at preparing educators who can:

1. Understand and teach the interconnections between environmental, social, and economic sustainability (Rieckmann, 2019).
2. Foster critical global citizenship values in their students (Rieckmann, 2019).
3. Collaborate with communities to implement locally relevant sustainability projects (Rieckmann, 2019).

### **Research Objectives**

The study is guided by three main objectives:

1. To investigate the current extent of SDG integration in teacher education curricula.
2. To identify challenges faced by teacher education institutions in embedding SDGs.
3. To recommend strategies for enhancing SDG-focused global citizenship competencies among future educators.



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### **Research Questions**

RQ1 How are SDGs currently incorporated into pre-service and in-service teacher education curricula?

RQ2 What challenges do teacher educators and curriculum developers face in embedding SDGs?

RQ3 What innovative approaches can effectively prepare educators for global citizenship through SDG integration?

In addressing these questions, the paper adopts a qualitative case study approach involving stakeholders in teacher education, with a focus on thematic analysis of curriculum documents, interviews, and focus group discussions. The remainder of this paper is organized as follows: Section 2 reviews the literature on SDG integration in education, teacher preparation for global citizenship, and relevant theoretical frameworks. Section 3 outlines the research methodology, followed by findings in Section 4, a discussion in Section 5, and conclusions and recommendations in Section 6.

### **Literature Review**

#### **Sustainable Development Goals in Education**

The adoption of the United Nations' 2030 Agenda marked a shift from a growth-centered development model to one that recognizes the interconnected nature of environmental, economic, and social well-being (Drosou, 2023). Education is central to achieving all 17 SDGs, but it is explicitly articulated in SDG 4, which calls for inclusive, equitable, and quality education for all (Wals & Benavot, 2021). This target emphasizes the significant part of education in promoting global citizenship and tackling pressing global trials. The attainment of target 4.7 is crucial in ensuring that education prepares learners with the necessary proficiencies to contribute to a more reasonable and supportable world (UNESCO, 2017). Although the SDGs offer a universal framework, national policies, institutional priorities. However, it is the teacher educators' abilities that will determine how well they can be translated into practical educational strategies (Kioupi, 2022). Integrating SDGs into teacher education necessitates both structural and pedagogical



changes in countries like Pakistan, where curriculum reforms are frequently top-down and exam-focused (Jamil et al., 2024).

### **Education for Sustainable Development (ESD) in Teacher Training**

The main tool for operationalizing the SDGs in the field of education is Education for Sustainable Development (ESD). ESD gives students skills like self-awareness, teamwork, anticipatory thinking, and systems thinking (Rieckmann, 2018). ESD means that educators can create lessons that incorporate social justice, economic sustainability, environmental stewardship into their core subjects. According to UNESCO (2020), the Roadmap for implementing ESD, teacher education institutions (TEIs) need to start integrating sustainability into all subject areas rather than treating it as a stand-alone subject (Hamwy et al., 2023). Curriculum audits, faculty development, and conformity to instructional standards are necessary for this. But according to a number of studies (Fiel'ardh et al., 2023; Varela-Losada et al., 2022; Boström, et al., 2018), teacher educators frequently don't have formal ESD training. This makes it difficult for them to mentor and model sustainable practices.

### **Global Citizenship Education (GCE) and Teacher Competencies**

The education for sustainable development is optimized by the Global Citizenship Education, SDG 4.7. This SDG strengthens Education for Sustainable Development by ensuring that students are connected in the globalized world through highlighting and inculcating the values, attitudes, and abilities required (UNESCO, 2017). Moreover, GCE nurtures one towards empathy, critical thinking, accountability for long-term solutions, and awareness of global problems (Bourn, 2020).

Teacher education programs integrating GCE typically emphasize:

1. Navigating cultural diversity in classrooms (Banks, 2015).
2. Encouraging learners to question injustices and act ethically (Andreotti, 2014).
3. Linking classroom learning to community sustainability issues (Evans et al., 2017).

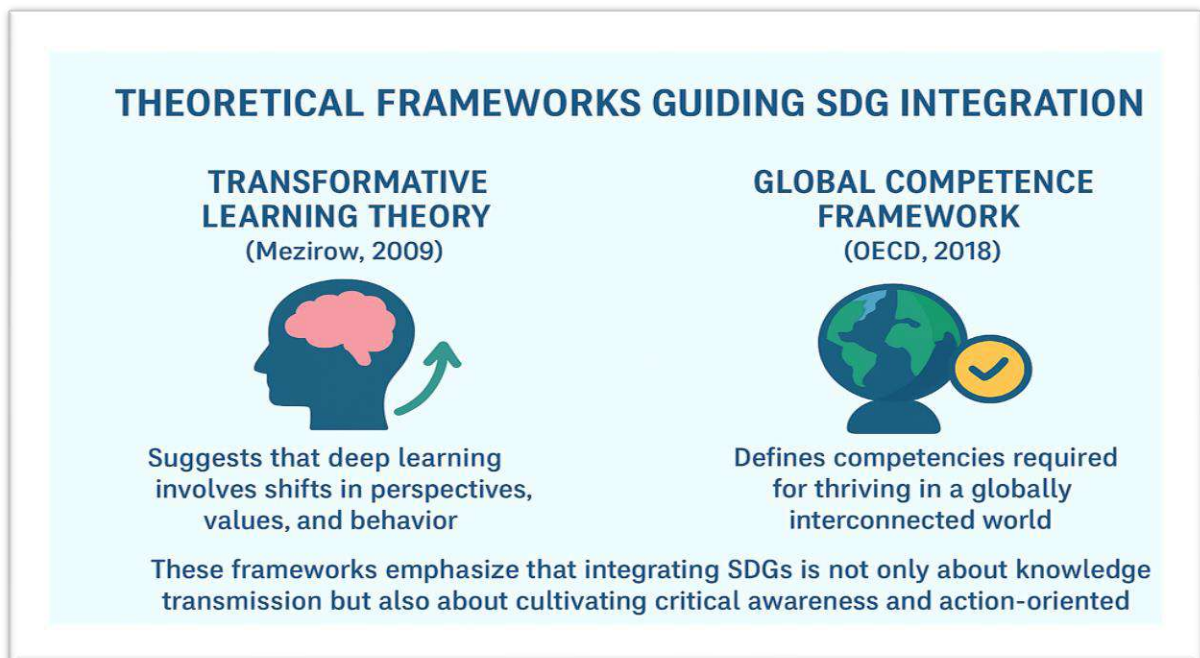
Despite its potential, GCE integration is often inconsistent. It has been observed by Franch (2020) that GCE in many teacher education programs is confined to elective modules, resulting in limited exposure for future teachers.



## Theoretical Frameworks Guiding SDG Integration

Two key frameworks underpin this study:

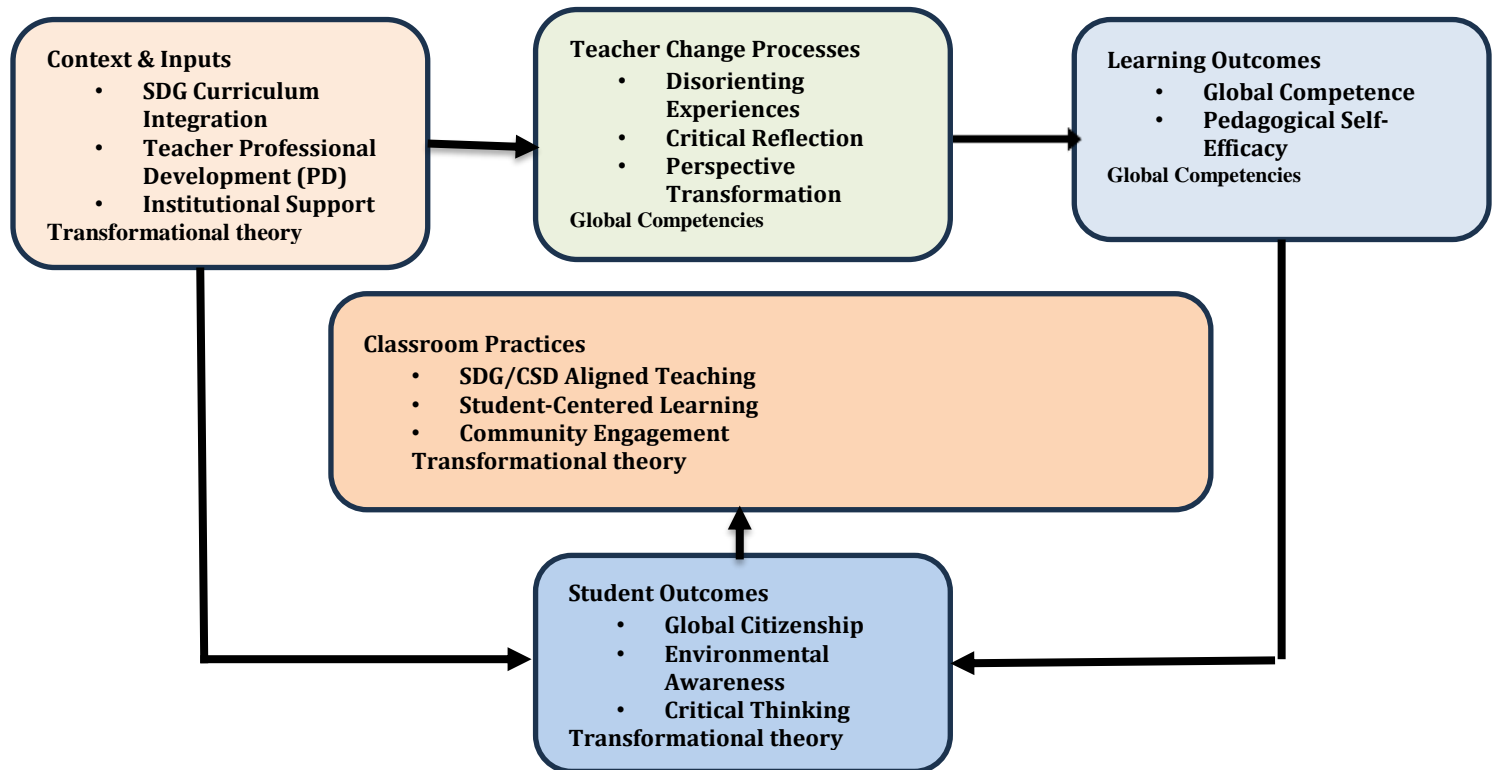
- **Transformative Learning Theory:** Mezirow, (2009) suggests that deep learning involves shifts in perspectives, values, and behavior. Integrating SDGs in teacher education encourages transformative experiences where teachers reassess assumptions about development, equity, and sustainability. In other words, this explains the process of personal and professional change that teachers undergo to act as change agents.
- **Global Competence Framework:** Zembylas, (2023) defines competencies required for thriving in a globally interconnected world as, including examining issues of local and global significance, understanding others' perspectives, and engaging in open, appropriate, and effective interactions. In conclusion, this theory provides the skills and outcomes teachers need to develop in themselves and their students to address SDGs effectively (Boström, et al., 2018).



The theoretical framework links the study with Transformative Learning Theory and the Global Competence Framework. Transformative Learning explains how teachers critically

reflect and transform their perspectives to act as change agents for sustainability and global citizenship (Boström et al., 2018). The Global Competence Framework highlights the skills, knowledge, and values needed to embed SDGs in education. Together, they guide the research in examining curriculum integration, challenges, and innovative approaches for preparing educators. These frameworks stress that incorporating SDGs involves developing critical awareness and action-oriented mindsets in addition to disseminating knowledge.

### The Conceptual Framework



*Note: This diagram shows a conceptual framework that connects inputs, processes, classroom practices, and outcomes in education—particularly linked to Sustainable Development Goals (SDGs), teacher professional development, and transformative learning.*



## **International Approaches to SDG Integration in Teacher Education**

Several nations have made significant progress in incorporating the SDGs into teacher preparation:

- All teacher education programs in Finland integrate ESD and GCE, and practicums are connected to community sustainability initiatives (Uitto & Saloranta, 2017).
- ESD is incorporated into national curriculum guidelines in Japan. Where teacher candidates must finish lesson planning with a sustainability focus (Liu & Kitamura, 2019; Leal et al., 2021; Wamsler, 2020).
- Indigenous perspectives on environmental stewardship are emphasized in Australia's interdisciplinary sustainability units for teacher preparation (Ferreira et al., 2019).

These illustrations demonstrate that a combination of faculty training, policy requirements, and opportunities for experiential learning is necessary for successful integration.

## **Obstacles to SDG Integration in Teacher Education**

Some persistent obstacles identified are as follows:

1. There is a curriculum overload. Since teacher education curricula are already extensive, adding new material can be difficult (Wals & Benavot, 2021).
2. Availability of limited faculty experts According to Varela-Losada et al. (2022), many teacher educators do not have official training in ESD and GCE.
3. SDG-aligned teaching resources are one of the resource constraints.
4. Traditional exams do not measure sustainability competencies effectively (Rieskmann, 2018). Hence a assessment gap.
5. A disconnection between Policy and Practice is noticed. National education policies may endorse SDGs but fail to provide implementation guidelines or incentives (Jamil et al., 2024).



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## **Curriculum Design Strategies for SDG Integration**

Holistic curriculum design approaches are necessary to incorporate SDGs into teacher education:

- **Infusion Approach:** Rather than treating each subject as a stand-alone course, sustainable development themes are integrated into all subjects (Bourn, 2020)
- **Capstone Sustainability Projects:** involving pre-service teachers in community-based projects or action research that tackles regional sustainability concerns (Evans. et al., 2017; Makrakis, et al., 2023).
- **Interdisciplinary collaboration:** Collaborating across disciplines (science, social studies, language, and arts) to address topics related to the SDGs.
- **Immersion in real-world:** problem-solving for teachers through fieldwork, simulations, and school-community partnership is known as experiential learning (Ferreira et al., 2019).

## **Implications for Teacher Professional Development**

SDG integration requires ongoing professional development for in-service educators. Studies show that short-term workshops often do not lead to lasting change unless they are supplemented with classroom coaching and mentoring (Kefalaki, 2020; Leal Filho, 2021). Research also indicates that sustainability-focused long-term professional learning communities (PLCs) foster collaboration, creativity, and continuous curriculum integration (Gajšek et al., 2023).

## **Literature Review Synopsis**

The literature highlights that integrating SDGs into teacher education poses a systematic and pedagogical challenge. Although frameworks like ESD and GCE provide strong conceptual foundations. Successful implementation requires curriculum redesign, faculty capacity building, resource development, and supportive policy. Environments are necessary for successful implementation. Integration is most effective when it spans disciplines, connects to experiential learning, and aligns with assessment systems, as shown by lessons learned from international best practices. Building upon these remarks,



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this research examines how SDGs are presently integrated in the education of teachers. The challenges that they encounter, and ways of instructing teachers to become global citizens who are able to deliver sustainable development within the classroom.

## **Methodology**

### **Research Design**

This research used a qualitative strategy to explore the integration of the Sustainable Development Goals in teachers' professional development training and how this prepares teachers to not just become global citizens but also to prepare their pupils to do the same. This research strategy was specifically chosen to consider, the complexities of the actual-world teaching scenario. This research strategy helps facilitate an in-depth investigation of an arena, which encompasses the teacher education schools (Yin, 2018). This qualitative study made sure to gather the views and processes of curriculum planners, teacher instructors, and pre-service teachers in depth and in detail (Creswell & Poth, 2023).

### **Research Setting and Participants**

Universities that had a clear mission or course outlines dedicated to sustainable development through education were selected. Three urban teacher education institutions fulfilled the requirement. Furthermore, purposive sampling was used to ensure that participants had relevant experience or responsibility in embedding sustainability principles into teacher preparation.

### **Participants included**

- **Pre-service teachers** (n = 15) in their final year of training, representing different subject specializations.
- **In-service teachers** (n = 10) enrolled in professional development programs.
- **Teacher educators** (n = 8) responsible for curriculum delivery and pedagogical guidance.
- **Curriculum developers** (n = 4) involved in designing and revising teacher education programs.



## **Data Collection Methods**

Three complementary data collection methods were employed to ensure triangulation and depth (Cresswell & Cresswell, 2018; Yin, 2018):

### **1. Semi-Structured Interviews**

- Conducted with teacher educators and curriculum developers to explore their understanding of SDGs, perceived importance, and challenges in curriculum integration.
- Each interview lasted between 45–60 minutes and was audio-recorded with participant consent.

### **2. Focus Group Discussions (FGDs)**

- Two FGDs were conducted with pre-service and in-service teachers separately.
- Discussions explored how participants encountered SDG-related themes in their coursework, teaching practice, and school-community projects.

## **Document Analysis**

As Patton (1999) puts it that within qualitative research, combining different methods of data collection helps in the triangulation of the data collected.

- Curriculum outlines, course syllabi, and teaching materials were examined to identify explicit and implicit references to SDGs.
- Policy documents from the institutions were also reviewed for alignment with SDG 4.7.

## **Data Analysis**

Data were analyzed using thematic analysis following Braun and Clarke's (2006) six-phase approach. All interviews were transcribed in English. They were shared with the interviewers for conformity. They were shared so that if the participant wants to make any changes, they can be made. However, there were no changes requested. The six-phase approach was as follows.

1. Familiarization with data through repeated reading of transcripts.
2. Generating initial codes related to SDG awareness, curriculum integration strategies, challenges, and innovative practices.



3. Searching for themes across interviews, FGDs, and documents.
4. Reviewing themes to ensure they accurately represented the data (Braun & Clarke, 2006).
5. Defining and naming themes (e.g., Curriculum Overload, Innovative Pedagogies, Policy-Practice Gaps).
6. Producing a final synthesis linking findings to the research questions and literature.

NVivo software was used to organize and code the qualitative data systematically, ensuring transparency in analysis and facilitating the retrieval of excerpts.

### **Trustworthiness and Rigor**

To enhance the credibility of the findings, multiple strategies were employed:

- **Triangulation** of data sources (interviews, FGDs, and document analysis).
- **Member checking** with participants to validate interpretations.
- **Peer debriefing** with two external education researchers to review coding frameworks and thematic structures.
- **Thick description** of the research context to allow transferability of findings to similar settings (Lincoln & Guba, 1988).

### **Ethical Considerations**

Ethical approval was obtained from the Institutional Review Board (IRB) of the lead researcher's university. This ethical approval is necessary as put forward by Farrow et al. (2020) to cause no inconvenience to the participants and the management. Participants were provided with information sheets detailing the study's aims, procedures, and their rights, including the right to withdraw at any time without penalty. Informed consent was obtained in writing before participation. Pseudonyms were assigned to all participants, and institutional identifiers were removed from transcripts to protect confidentiality. All digital data was stored on password-protected devices and accessible only to the research team (Creswell & Creswell, 2018).

### **Limitations of the Methodology**

While the qualitative case study design offered depth of insight, its findings are context-specific and not statistically generalizable. Furthermore, participants' accounts may have been influenced by social desirability bias, particularly in institutional contexts where



sustainability is a stated priority. However, the combination of multiple data sources and rigorous analytic procedures was intended to mitigate these limitations.

### **Findings**

Analysis of interviews, focus group discussions, and curriculum documents revealed four major themes regarding the integration of Sustainable Development Goals (SDGs) into teacher education curricula:

#### **Awareness and Conceptual Understanding of SDGs**

Across all participant groups, awareness of the SDGs was relatively high, particularly among teacher educators and curriculum developers. Most participants could identify the broad purpose of the SDGs and recognized SDG 4.7 as directly relevant to their work. However, pre-service teachers' understanding tended to be fragmented, often limited to environmental aspects such as recycling or conservation, with less awareness of the social and economic dimensions of sustainability.

*“We know about clean energy, protecting the planet, reducing plastic — but honestly, I’m not sure how this connects with teaching math or language.”* (Pre-service teacher, FGD)

Curriculum developers emphasized that while policy frameworks referenced the SDGs, these references were often symbolic rather than operational:

*“Our mission statements sound progressive, but translating them into lesson plans and assessments is still a challenge.”* (Curriculum developer)

Document analysis confirmed this gap. Although two of the three institutions explicitly mentioned “sustainability” and “global citizenship” in their program aims, explicit mapping of course content to specific SDGs was absent in most course syllabi.

#### **Curriculum Integration Approaches**

Participants described a variety of strategies for integrating SDG-related content, though these were mostly ad hoc rather than systematically embedded.

- **Standalone Modules:** One institution offered an elective course on “Education for Sustainable Development,” which covered environmental education, human rights, and global citizenship themes. However, enrollment was limited, and the course was not compulsory.



- **Infusion Across Subjects:** Some teacher educators infused SDG topics into their core courses, for example, using real-world sustainability problems in mathematics word problems or discussing gender equality through literature texts.
- **Practicum Projects:** Several pre-service teachers reported engaging in community-based projects, such as organizing school awareness campaigns on water conservation or tree planting.

While these approaches demonstrated creativity, they were dependent on individual educators' initiative rather than institutional mandates.

### **Challenges and Barriers to SDG Integration**

Three recurring barriers emerged strongly:

#### **1. Curriculum Overload**

Teacher educators reported that existing syllabi are already dense, leaving little room to introduce additional SDG-related content without removing other topics.

*"We barely finish the syllabus as it is. Adding sustainability topics means something else has to go — and there's no agreement on what to drop."* (Teacher educator)

#### **2. Limited Pedagogical Preparation**

While educators recognized the importance of sustainability, many lacked trainings in interdisciplinary teaching methods or problem-based learning approaches that SDG integration often requires.

*"I can talk about SDGs in theory, but designing active learning activities around them is new to me."* (In-service teacher)

#### **3. Resource Constraints**

Access to teaching resources tailored to the local context was limited.

Participants often relied on online materials developed in other countries, which did not always resonate with students lived realities.

### **Innovations and Opportunities**

Despite these challenges, the study identified promising practices and opportunities for scaling up integration:



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- **Community–University Partnerships:** One institution collaborated with a local NGO to incorporate climate action projects into teaching practicums, enabling pre-service teachers to connect theory with community engagement.
- **Interdisciplinary Faculty Teams:** At another institution, a pilot project brought together faculty from science, social studies, and education departments to co-develop lesson plans addressing multiple SDGs.
- **Digital Integration:** Some participants used digital storytelling tools to encourage students to create narratives around sustainability challenges in their communities.

*“Students love telling stories — when they tell a sustainability story from their own neighborhood, it becomes real for them.”* (Teacher educator)

Document analysis also revealed that institutions with external funding or international partnerships were more likely to experiment with such innovations.

### **Summary of Findings**

Overall, the findings suggest that while awareness of SDGs in teacher education is growing, integration remains partial, uneven, and highly dependent on individual initiative. Existing efforts, though creative, lack the institutional coherence needed for sustained impact. The opportunities are to include SDG integration as a priority in the core curriculum, develop faculty capacity in sustainability pedagogy, and create partnerships to link teacher education with community action.

### **Discussion**

Based on the findings of this study, incorporating the Sustainable Development Goals into preservice teacher preparation programs has the potential to increase preservice teachers' knowledge, skills, and attitudes towards promoting global citizenship in their classrooms. This aligns with previous studies that highlight educators' key roles in promoting sustainability, equity, and social responsibility (Wals & Benavot, 2021). Based on this study's findings, Jamil, et al (2024) agrees that the incorporation of the Sustainable Development Goals into teacher education programs can strongly contribute to preservice teachers' knowledge, skills, and attitudes in promoting global citizenship in their



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prospective classrooms. This also aligns with a few research highlighting education's pivotal role in enhancing sustainability, equity, and social responsibility (Angelaki, 2024; Bourn, 2020; UNESCO, 2017).

There are significant implications when a curriculum transitions from being content-oriented to being competency-based and transformative (Jamil et al. 2024). Participants illustrated how, when framed within local and global problems such as gender equality, climate change, and inclusive education, the SDGs are pulled out of the realm of intangible international targets into tangible blueprints that can be localized by educators for their own local settings (UNESCO, 2021). This is in line with the argument of Leicht et al. (2018); Nocca and Vizzari (2025), that contextualization is necessary for meaningful integration. The research also illustrates the importance of adopting theoretical as well as practical components in teacher training programs (Mwila, 2025). Although theory helps provide pre-service teachers with a conceptual framework, practicum offers them the opportunity to incorporate pedagogy concerning the Sustainable Development Goals (SDGs) into theoretical parts of teacher training (Papavasileiou et al., 2025; UNESCO, 2021). Pre-service instructors can use the SDGs within the appropriate pedagogy and education doctrine in actual contexts through practicum exposure, and theory serves as a conceptual framework. This supports the work of Mwila (2025) and Papavasileiou et al. (2025), which contends that experiential learning is essential in enhancing sustainability literacy. Through the findings, pre-service instructors are increasingly getting exposed to the SDGs, but for them to utilize that exposure within the classroom, they must also acquire some skills (Nocca, & Vizzari, 2025). The ability to create interdisciplinary lesson plans that integrate language arts, science, and math with sustainability issues, for example, was identified as lacking (Makrakis et al., 2023). To close these gaps, curriculum modifications that prioritize inquiry-based learning, project-based learning, and cross-curricular integration are required (Fiel'ardh, et al., 2023). Another important subject to cover is institutional commitment (Gajšek et al., 2023).

While individual faculty members may support SDG integration, systemic support, including policy alignment, faculty training, and resource allocation, is necessary for



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sustainable change (Leal Filho et al., 2021). As Wals and Benavot (2021) notes, without institutional support, sustainability education faces the risk of being written off as an "add-on" rather than a vital part of teacher preparation. Finally, the study confirms the ethical need to train future teachers to be global citizens who can inspire their students to engage with complex global issues (Boström et al., 2018). Given the escalating environmental crises, social injustices, and digital transformations, incorporating the SDGs into teacher education is not only an academic improvement but also a social necessity (Edwards, 2020; Gajšek et al., 2023).

### **Conclusion**

In conclusion, the integration of Sustainable Development Goals (SDGs) is not only an improvement in pedagogy in teacher education programs but an urgent call to equip teachers with the capacity to deal with the pressure of a more interdependent, sophisticated, and uncertain world. The research identifies that after the teachers are professionally trained using the SDG-based curricula, they will automatically prepare the students for the world. As teachers can instill a spirit of sustainability awareness at the initial stages of the school years, hence, institutions of professional development are absolutely well-positioned as agents of social change. The research also found that teachers are likely to employ inclusive pedagogies, incorporate sustainability-oriented content in their curriculum, and encourage students to take a significant role in solving issues facing the community. Apart from the curriculum design, this subsequently affects the official standards, teacher program plan, and assessment strategies. Therefore, thoroughly integrating SDGs throughout the curricula, teaching and assessing teacher professional development programs can shift from theory to more practical and result in becoming developers of teachers who are not only change agents but also reflective practitioners. Finally, incorporating SDGs in the teacher development program will enrich the state's education goals with global plans for stability. It empowers educators with the tools they need to guide the next generation to inclusive, sustainable, and responsive futures. The capacity of this method to generate ripple effects, from teacher candidates to classrooms, from classrooms to communities, from local to global impact, is what makes it transformational. A generation of teachers, and thereby citizens, who are willing to assume



the leadership role in accomplishing the vision of a more peaceful, just, and sustainable world can be molded by teacher education if it undertakes this charge with commitment and creativity.

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