



Standards of the Sustainable Teacher: An Exploratory Study Considering the UNESCO Framework and the SDGs 2030

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ABSTRACT

Teacher standards represent the cornerstone for achieving high-quality and sustainable education, as they contribute to building teachers' capacities in line with global variables and community needs, which enhances their role in achieving the SDGs 2030. The current study aims to derive proposed standards for the sustainable teacher based on the global framework for professional standards for teaching developed by the Education International (EI) in cooperation with UNESCO and the United Nations Sustainable Development Goals 2030. The aim is to address the gap in the existence of comprehensive standards that link the professional competencies required for the teacher with the requirements of sustainability education, which contributes to the development of teacher preparation programs in colleges of education. The study problem is determined by answering two main questions: What are the proposed standards for sustainable teachers? What are the recommendations necessary to develop sustainable teacher preparation programs based on these standards? The study used the qualitative approach, based on focus groups that include experts to analyze international standards and SDGs 2030, evaluate the suitability of the proposed standards, and formulate recommendations for developing teacher preparation programs. The study reached a list of sustainable teacher standards, which included 5 main fields including 14 standards with 38 performance indicators. It also provided recommendations directed at developing teacher preparation programs in colleges of education in a way that enhances the achievement of SDGs 2030.

Introduction

Education is increasingly important as a key tool for achieving sustainable development, as it is a fundamental element in building a sustainable society capable of facing environmental, social and economic challenges. Achieving SDGs 2030 requires the integration of

global and local efforts and depends largely on the role of the teacher in transferring these goals and related knowledge, skills and values to future generations.

The teacher is not just a transmitter of knowledge, but rather an active element in shaping students' awareness of sustainable

issues, and therefore must be characterized by a set of professional standards that qualify him to perform this role effectively. Teacher preparation should not be limited to academic and educational preparation only, but must focus to a great extent on developing teachers' awareness of SDGs 2030, as well as developing the ability to think sustainably and how to make appropriate decisions in light of preserving the rights of future generations, which qualifies them to teach this to their students in schools and in various educational contexts (Al-Baz, 2019). Sustainable education is a new model for preparing teachers, as it helps them develop a systematic vision that addresses the basic social purposes of education in the context of the twenty-first century. Sustainable education can stimulate discussion about the role of teacher education in addressing global environmental and social challenges (Nolet, 2009)

Perhaps one of the most prominent standards set for teachers is the Global Framework for Professional Standards for Teaching, which serves as a reference tool for many countries and educational institutions, providing a basis for evaluating teachers and guiding their preparation programs. The framework highlights the importance of the partnership between teachers and the local community, as the teacher does not work in isolation from the environment in which he teaches but is part of a comprehensive process aimed at achieving sustainable development. By focusing on continuous professional development and the use of effective educational practices (Education International & UNESCO, 2019)

Implementing education for sustainable development requires qualified and motivated teachers to be agents of change. Teachers must acquire the knowledge and skills necessary to be active in this field (Bürgeener & Barth, 2018). Therefore, preparing sustainable teachers in colleges of education requires a review of educational programs designated for this purpose, so that they are in line with global trends and achieve integration between academic and pedagogical skills. The Global Framework for Professional Standards for Teaching and SDGs 2030 are the foundations for formulating

sustainable teacher standards, including the promotion of teaching skills that contribute to social, economic and environmental sustainability.

Background and Purpose

Sustainable development is no longer a luxury, but a necessity. Sustainability standards have become an important mechanism for encouraging sustainable leadership. Although bringing these standards into the classroom is difficult, they are vital in the pursuit of sustainability. Students of all ages are the teachers, practitioners, managers and experts of the future. Whether they become consultants, academics, engineers, designers, politicians, civil servants or others, they will shape the future of sustainability and sustainable development standards. Therefore, understanding the standards is important to equip the next generation of global citizens to help everyone make sustainable choices. To achieve this, education must equip learners with the ability to interpret, apply and use the standards in practice. The teacher has an important role in transmitting and developing sustainability standards; and meeting the challenges posed by transferring these concepts into the classroom (Wright et al., 2019).

1- Global Framework for Professional Standards for Teaching

In 2019, the Global Framework for Professional Standards for Teaching was developed by Education International (EI) in collaboration with UNESCO. It aims to improve the quality of education by setting comprehensive professional standards for teachers at a global level, which contributes to promoting sustainable educational practices. It supports the implementation of the education goal in the 2030 Sustainable Development Plan, especially Goal 4 (SDG4). At the 8th World Education Conference held in Bangkok in July 2019, a resolution was adopted supporting the implementation of this framework, stressing the need to involve teachers and their unions in formulating and implementing education policies. To ensure improved learning for all. It

aims to provide unified standards for teachers' professional practices, including knowledge and understanding, educational practices, and professional relationships. These standards are designed to support the development of teachers and enhance their practices so that they are consistent with global educational goals and contemporary challenges. These standards set a comprehensive framework for preparing teachers and evaluating their performance at a global level and aim to improve education and teaching to be in line with the needs of students in various fields such as learning, teaching, and performance assessment.

- **Domain 1 (Knowledge and Understanding):** Focuses on what the teacher should know, such as how students learn and the different social and developmental needs of students.
- **Domain 2 (Instructional Practice):** Concerns how the teacher implements this knowledge in practice, including organizing educational activities and ongoing assessment of students.
- **Domain 3 (Professional Relationships):** Reinforces the importance of collaboration between teachers, colleagues, and parents, and includes developing effective professional relationships that contribute to the growth of students and the growth of teachers themselves.

These standards include the following (Education International & UNESCO, 2019):

First: Knowledge and understanding in teaching

1. How students learn and their educational needs:
 - The effects of students' physical, social and intellectual development.
 - The effects of social, cultural and economic diversity and students' circumstances and educational environments.
 - The effects of digital technology on students' learning.
2. Educational content:
 - Basic knowledge of the content and related skills.

- The impact of content knowledge on teaching methodologies.
- 3. Research and analysis methods:
 - Research methodologies and related analytical skills that can be applied to new learning.
 - Principles and practices of effective student assessment.

Second: Educational practice

Teachers' practice should consistently demonstrate:

4. Lesson planning:
 - Defining educational goals for students.
 - Researching, organizing and scheduling lessons to achieve those goals.
5. Teaching activities:
 - Practicing teaching methods and organizing educational activities that are consistent with the requirements of the academic content.
 - Diversity in teaching and learning facilitates student interaction.
6. Safe learning environment:
 - A safe and secure environment for students.
 - Effective classroom management, taking into account the needs of individuals and the class as a whole.
7. Student assessment:
 - Evaluating students work fairly and reliably using a range of appropriate methods.
 - Analyzing data to modify planning and practice to achieve educational objectives.

Third: Professional relationships

Teachers' professional relationships should include:

8. Professional collaboration:
 - Collaboration in planning lessons, educational activities and student well-being.
 - Collaboration that supports teachers' learning and professional development.
9. Community engagement:
 - Providing formal and informal reports to parents, caregivers and the community on student learning and well-being.
 - Addressing a range of professional issues including expertise and professional status.
10. Continuing professional development:

- Participation in ongoing professional learning.
- Continuous analysis and reflection on professional practice to develop teaching practices.

2- United Nations Sustainable Development Goals (SDGs 2030):

The SDGs 2030, adopted by the United Nations in 2015, are a global plan aimed at achieving comprehensive and sustainable development worldwide. These goals include 17 main objectives that seek to achieve a balance between the economic, social and environmental dimensions of development. These goals aim to eradicate poverty in all its forms, ensure quality education for all, achieve gender equality, and promote human health, in addition to achieving social justice and protecting the environment from degradation. These goals are considered a roadmap for the future, as they focus on improving people's lives and protecting the planet (United Nation, 2015; United Nations Development Program in the Arab Countries, 2022).

Perhaps what distinguishes these goals is their multifaceted nature, as they draw attention to a variety of topics within the concept of sustainable development, from poverty reduction and responsible consumption to gender equality and climate action. Focusing on partnership for the implementation of the goals is also an important factor in achieving the goals and over the coming years, the sustainable development goals will bring together stakeholders from all sectors of society to bring about change and transform the world (Caniglia et al., 2018). These seventeen goals aim to ensure that all people on earth, now and in the future, enjoy sustainable, peaceful, prosperous and equitable lives. These goals address a number of global challenges that must be overcome for humanity to survive and show the environmental constraints of the use of natural resources from the extreme limits, so they recognize that poverty eradication cannot be achieved without strategies aimed at promoting economic development. The goals address a range of social needs in different fields such as education,

health, social protection and employment opportunities, while at the same time addressing climate change and environmental protection and addressing the main obstacles to achieving sustainable development such as inequality, unsustainable consumption patterns, weak institutional capacities and environmental degradation (UNESCO, 2015).

One of the most prominent features of SDGs 2030 is their global dimension and indivisibility, as they target all countries, whether from the South or the North. To build a more sustainable world and address the sustainability issues highlighted by SDGs, education is essential to achieve these goals, as education for sustainable development aims to develop competencies that enable individuals to reflect on their actions and understand their current and future social, cultural, economic and environmental reality at the local and global levels. It is also necessary to enable individuals to act in complex situations in a sustainable manner. This may require them to follow new paths, to contribute to directing their societies towards sustainable development (Gordon & Dixon, 2021).

3- Preparing teachers for sustainability

Education for sustainable development should be seen as an integral part of good education and a fundamental component of lifelong learning. All educational institutions should focus on addressing sustainable development issues and supporting the development of sustainability-related competencies as part of their responsibilities. Education for sustainable development provides education that is truly relevant and meaningful to all students considering the challenges facing the world today. Education for sustainable development is comprehensive and capable of bringing about the desired radical change. It also deals with the contents of learning and its outcomes, educational methods and the learning environment. Accordingly, it does not only include some content related to climate change, poverty and unsustainable consumption patterns in the curricula, but also provides interactive teaching and learning environments that focus on students. This requires moving from an

education-based approach to a learning-based approach and adopting educational methods that adopt a practical approach that are capable of bringing about the desired change and supporting self-learning activities, participation, cooperation, problem solving and joint activities between scientific disciplines. These methods alone can develop the main competencies necessary to promote sustainable development (Offorma & Obiefuna, 2017).

Education for sustainable development contributes to enhancing the goals of education in the cognitive, social-emotional and behavioral-skill fields; Education for sustainable development should therefore be integrated into all curricula of formal education programs from K-12, as well as into teacher preparation and training programs (Al-Baz, 2024), as curricula ensure that children and youth acquire basic skills in addition to general skills that can be used in various fields, such as critical thinking, problem solving, advocacy, and conflict resolution, to help them become responsible global citizens. One of the desired goals of curricula that deal with sustainability is “to enhance the capacity of educational systems to prepare learners to strive for sustainable development” (United Nations, 2015). One study has shown that future teachers have good knowledge of the biophysical environment and the impacts of unsustainable practices but may hold some misconceptions about the causes of climate change. Teachers also show a willingness to take action to protect ecosystems through education and advocacy within their school communities (Kriewaldt & Lee, 2022). There is an urgent need to prepare teachers for sustainability, as four distinct approaches to integrating sustainability education into teacher preparation programs have been developed. Teachers, including the integration of education across curriculum fields, or through a dedicated core subject, or as part of a core subject, or as a dedicated elective subject (Evans et al., 2017).

Sustainability education faces multiple challenges, including the lack of basic knowledge of the environment or sustainability in teacher preparation programs, in addition to the complexity of the concept of sustainability

itself. It requires developing teachers who can use the sustainability education framework in their future teaching practices (Ferreira et al., 2019).

Considering the above, the Global Framework for Professional Standards for Teaching was adopted in this study due to its comprehensiveness and accuracy in identifying the competencies and skills that teachers must have to ensure the quality of the educational process. The framework is distinguished by its identification of key fields including knowledge, educational practices, professional relationships, and continuous development, making it an effective tool for linking professional standards to contemporary educational needs. The framework also provides a flexible vision that can be adapted to meet the requirements of education for sustainability, in line with SDGs 2030. The framework was used as a basis for deriving the Sustainable Teacher Standards, as the framework enhances the link between the teacher’s professional competence and his role in achieving comprehensive and sustainable development. The framework also helps ensure that the proposed standards are not limited to a local context only, but rather reflect global trends that support the development of education to address environmental, social and economic challenges.

As for SDGs 2030, they are characterized by their comprehensiveness and interconnectedness, making them an ideal tool for guiding education reforms, including teacher preparation, towards achieving sustainable economic, social and environmental goals. The SDGs were used in the research as a comprehensive reference for formulating sustainable teacher standards, ensuring that these standards are consistent with international efforts and supporting their alignment with Egypt’s Vision 2030. This contributes to achieving a qualitative shift in preparing teachers to be able to activate their role in achieving sustainable development inside and outside the educational environment.

The study therefore aims to provide an integrated framework that can guide the development of sustainable education at the level of teacher preparation and activate their

role in building a sustainable society considering both the Global Framework for Professional Standards for Teaching and SDGs 2030. The study problem can be identified in the following questions:

1. **What are the proposed standards for sustainable teachers considering both the Global Framework for Professional Standards for Teaching and SDGs 2030?**
2. **What are the proposed recommendations for developing sustainable teacher preparation programs in colleges of education?**

Methods

The research used the qualitative research method represented in the focus group method "focus groups" to set sustainable teacher standards considering the global framework for professional standards for teaching and the United Nations Sustainable Development Goals 2030. The following explains the method of using focus groups:

Focus groups are a discussion between a group of respondents ranging in number from (6-12 individuals) mostly to provide information and data. They are chosen to discuss an issue or phenomenon and delve into, through a set of key or specific questions, the aim of which is to reach a deep understanding of the views, experiences, perceptions, and beliefs of the phenomenon or topic under discussion.

Focus groups are considered one of the most important tools of qualitative research, and there is a large amount of information that results from them. This constitutes a crucial element in achieving the objectives of the study. The discussion is directed by one of the researchers as a facilitator, and the focus group is considered a quick and comprehensive means of collecting information and classifying or grading it according to certain standards.

Focus groups are used when questions of the type how and why are more important than whether and how much, and when knowing the interaction of a group around specific research questions and we need answers instead of yes or no. Also, when we want qualitative data instead

of quantitative data. The need is quick to know the degree of response to some issues (Grudens-Schuck et al., 2004).

The steps of holding focus groups are:

- Clearly define the goal.
- Preparing questions for dialogue and interview.
- Identifying and selecting participants.
- Preparing in advance for the meeting.

Participants

The individuals included in the research, who are several specialists in the field of curricula, teaching methods and educational principles from colleges of education in Egypt. The focus groups consisted of (9) experts. Who were included in the focus groups implemented by the researcher, which numbered two groups. Data was collected during 4 meetings in the period from October to November 2024. The interview method was relied upon to deal electronically via the ZOOM program, a group chat video with experts.

Data collection and analysis

One of the tools of the qualitative approach is focus groups, to answer the study question. Focus groups are a type of interview, during which a discussion takes place between the members of the group. The focus groups were divided into two groups: The first focus group consisted of five experts whose task was to read the second focus group consisted of four experts, whose task was to provide an analytical reading of SDGs 2030.

How focus groups work in data analysis:

1. Determining the objectives of focus groups: Focus groups were chosen as a tool for the current study to achieve the following objectives:
 - A. A careful analytical reading of both the Global Framework for Professional Standards for Teaching and SDGs 2030.
 - B. Conducting group discussions to determine the extent to which the Global Framework for Professional Standards for Teaching and SDGs 2030 are compatible with the characteristics and nature of the teacher in the Egyptian learning environment so that

these goals and standards can be adapted to reach the standards of the sustainable teacher.

2. Distributing experts to the two focus groups: The current study requires two focus groups, the first to derive general standards for the sustainable teacher from both the Global Framework for Professional Standards for Teaching, and the second to derive standards for the sustainable teacher that achieve SDGs 2030.
3. Focus group meetings: 4 meetings were held for each group, so that the four meetings addressed the stages of data analysis in each focus group.
4. Data analysis stages: Each of the two groups went through four stages of data analysis, which are:
 - A. Organizing the data, which is the initial stage, in which the Global Framework for Professional Standards for Teaching and the SDGs 2030 were read individually, as they were sent to all members of the two groups before the first meeting, and a group discussion took place during the first meeting of each group separately to organize the data. At this stage, all the statements that the group reached regarding the field of standards were identified, and the general fields and standards for the sustainable teacher were derived.
 - B. Classifying the data, at this stage, all the general standards for the sustainable teacher that the first focus group reached were identified, and the specialized standards for the sustainable teacher that the second focus group reached were classified. They were written by the researcher.
 - C. Deductive classification: This stage included deep thinking, brainstorming, and verbal interaction between group members. This stage is characterized by depth, as it discusses what the group reached in the previous stage, so that the general standards represent the standards agreed upon by the members of the first focus group, and the specialized standards are the standards that are directly related to the global goals for sustainable development and reflect the

tangible needs that help the sustainable teacher achieve those goals in his educational practices. They address the in-depth and focused aspects that focus on activating the goals of sustainable development within the framework of education.

- D. Formulating the Sustainable Teacher Standards: In this stage, general and specialized standards were formulated for the sustainable teacher derived from the global framework for professional standards for teaching and SDGs 2030, which were reached by the two focus groups in the deductive classification.
- E. The stage of reviewing the proposed standards: In this stage, the general and specialized standards for the sustainable teacher were reviewed, to ensure that there is no repetition during the final formulation of the standards and to integrate them together so that they are in the form of main fields, and each field includes several standards and each standard has a number of performance indicators. They were also presented to several specialists in the field of curricula and teaching methods; To ensure that they take into account the latest educational trends and best educational practices, and to ensure their compatibility with SDGs 2030, in addition to their suitability for the requirements of sustainable education in various local and international educational contexts.

Results:

To answer the main question of the study, which stated: What are the proposed standards for the sustainable teacher considering both the Global Framework for Professional Standards for Teaching and SDGs 2030?

The researcher used focus groups that analyzed both the Global Framework for Professional Standards for Teaching and SDGs 2030. The analysis went through several stages previously explained, starting with organizing the data and ending with formulating the sustainable teacher standards. The proposed standards include 5 main fields and include 14 standards, which include 38 performance indicators that describe

the sustainable teacher performance that the study reached. The final formulation of the proposed standards considered that they should be:

- a. Comprehensive and applicable to all subjects.
- b. These standards can be modified to suit diverse educational or cultural contexts.
- c. Reflect a clear concept of comprehensive sustainability.
- d. It can be easily integrated into the daily teaching plan.
- e. It contributes to enhancing environmental and social awareness among teachers.
- f. It is aligned with the SDGs 2030 (such as quality education, climate action, equality).

- g. It considers the diversity of students' needs and individual differences.

The Sustainable Teacher Standards also focused on the skills and practices that teachers should apply during their job performance to achieve the goals of sustainable education. In other words, these standards define “the activities and practices that teachers perform” to achieve sustainability in education, including applying sustainable teaching strategies, organizing assessments, managing the classroom effectively, and promoting sustainable values among students.

The proposed standards for the Sustainable Teacher include the following:

Standards	Performance Indicators
First Field: Knowledge and Understanding	
Familiarity with the concepts of inclusive sustainability	<ol style="list-style-type: none"> 1. The teacher has in-depth knowledge of the basic concepts of sustainability (e.g. social justice, climate, and resource management). 2. Explains the environmental, social, and economic impacts of unsustainable behaviors. 3. It connects the concepts of sustainability with the daily lives of students and the local community.
Understand the relationship between education and sustainable development	<ol style="list-style-type: none"> 4. Demonstrates how education can achieve the Sustainable Development Goals (e.g. eradicating poverty, promoting equality). 5. Discusses the impact of individual and collective decisions on sustainability issues. 6. Encourages critical thinking about sustainable practices at the level of individuals and communities.
Knowledge integration in education	<ol style="list-style-type: none"> 7. Highlights the importance of integrating knowledge from different fields in promoting sustainability. 8. Illustrates the relationship between subjects (such as literature, mathematics, and science) and sustainability issues. 9. Refers to historical and scientific issues associated with sustainability.
Second Field: Educational Practices	
Planning for sustainable education	<ol style="list-style-type: none"> 10. Designs study plans that promote awareness of global and local sustainability issues. 11. It links educational activities to sustainability practices such as reducing waste. 12. Consider the diversity of students' needs and cultural and social backgrounds when planning.
Use innovative teaching strategies	<ol style="list-style-type: none"> 13. Diversifies between teaching strategies (e.g. discussions, projects, collaborative learning). 14. It encourages students to seek solutions to sustainability problems using creative and critical thinking. 15. It uses digital technologies and real-life examples to explain sustainability concepts.

Implementation of sustainable educational activities	<p>16. Involves students in the design and implementation of activities such as community projects, field trips.</p> <p>17. Supports activities that promote critical thinking and inquiry.</p> <p>18. Evaluates activities based on sustainability goals and student engagement.</p>
Considering diversity and individual differences	<p>19. Designs activities to suit the diverse needs of students, including those with special needs and gifted.</p> <p>20. It provides therapeutic activities for the defaulters and enrichment programs for the gifted in the context of sustainability.</p>
Sustainable Assessment	<p>21. Design objective assessment tools to measure students' awareness of sustainability concepts.</p> <p>22. Uses various evaluation methods (e.g. projects, research, presentations).</p> <p>23. Provides constructive feedback that promotes students' understanding of sustainability issues.</p>
Third Field: Professional and Social Relations	
Building community partnerships to support sustainability	<p>24. Collaborates with community institutions to implement sustainable educational initiatives.</p> <p>25. Involves parents and the community in educational activities related to sustainability.</p>
Foster a supportive learning environment	<p>26. Creates a safe learning environment that respects cultural and social diversity.</p> <p>27. Students are encouraged to collaborate and participate in classroom and extra-curricular activities.</p>
Fourth Field: Use of Resources and Technology	
Employing technology to promote sustainable education	<p>28. It uses digital tools and modern technologies to clarify sustainability issues.</p> <p>29. Students are encouraged to use technology to search for sustainable solutions and analyze data.</p> <p>30. It leverages local environmental resources to produce environmentally friendly teaching aids.</p>
	<p>31. Innovates interactive teaching aids using multiple technologies to support students' understanding Using teaching aids that support sustainability of sustainability issues.</p> <p>32. Involves students in designing teaching aids using recyclable materials.</p> <p>33. Assesses the effectiveness of teaching aids in achieving sustainable education goals.</p>
Fifth Field: Professional Commitment	
Commitment to professional ethics and sustainable education	<p>34. The teacher adopts sustainable practices in his professional and personal life as a role model.</p> <p>35. Supports activities that promote ethical and social values related to sustainability.</p>
Continuing Professional Development	<p>36. Participates in training programs to update his/her knowledge and skills about sustainable education.</p> <p>37. Conducts educational research that contributes to the development of sustainable education practices.</p> <p>38. He exchanges experiences with colleagues to improve educational performance.</p>

The standards for a sustainable teacher can be defined based on the standards provided by the current study as a set of professional skills and practices that a teacher must possess and apply during his/her educational practice to achieve the goals of sustainable education. These standards are a guiding framework that contributes to developing teachers to be able to adapt their practices to future challenges and ensure the sustainability of the quality of education in various contexts. To answer the second question of the study, which is: "What are the recommendations for developing sustainable teacher preparation programs in colleges of education?"

To reach recommendations for developing sustainable teacher preparation programs in colleges of education, a comprehensive methodology was followed that combines theoretical analysis and practical application. It began with a review of the literature related to the global framework for professional standards for teaching and SDGs 2030. Group discussions were also held with a group of experts in the fields of education, curricula, and teaching methods. The data extracted from the focus groups were analyzed, which helped identify gaps and opportunities for developing academic programs. Through this process, a set of recommendations were reached that aim to improve sustainable teacher preparation programs, so that they are more compatible with current and future requirements in the context of sustainable education. They can be presented as follows:

First: In the field of academic preparation

- Including courses that introduce the concepts and goals of sustainability, with a focus on issues such as social justice, climate change, resource management, human rights, and global citizenship
- Enhancing integration between academic disciplines and linking them to sustainable development issues, while clarifying the relationship between theoretical knowledge and practical application.
- Training student teachers to analyze the role of education in achieving the SDGs 2030 and

linking them to the lives of students and society.

Second: In the field of educational preparation

- Preparing student teachers to design study plans and educational activities that consider sustainability issues and meet the different needs of students.
- Training them to use innovative teaching strategies such as project-based learning, cooperative learning, and problem solving to enhance critical and creative thinking.
- Developing their sustainable assessment skills, including designing assessment tools that measure students' awareness of sustainability concepts and providing effective feedback.
- Enhancing student teachers' participatory leadership skills to enable them to manage school activities and participate in decision-making.

Third: In the field of cultural and social preparation

- Instilling ethical and professional values related to sustainability, while enhancing the student teacher's commitment to social responsibility.
- Preparing student teachers to deal with cultural and social diversity within the school environment, while designing educational activities that suit the different needs of students.
- Encouraging participation in international workshops and exchange programs to enhance their understanding of global issues and diverse educational practices.
- Encouraging cooperation with the local community and parents to implement educational initiatives that support sustainability.

Fourth: In the field of technical and technological preparation

- Training student teachers to use technology in education to support sustainability concepts, such as analyzing environmental data and using interactive tools.

- Enhancing skills in producing and using sustainable educational tools, with a focus on using recycled materials and available resources.

Fifth: In the field of research preparation

- Providing student teachers with educational research methodologies that enable them to study sustainability issues and develop effective educational practices.
- Encouraging them to conduct procedural research to analyze classroom problems and contribute to the development of sustainable education.

Conclusion:

The results of the study indicate that the proposed standards for the sustainable teacher considering the global framework for professional standards for teaching and SDGs 2030 focus on developing skills and capabilities that enable the teacher to implement educational practices that contribute to achieving sustainability goals. The study recommendations also emphasized the need to redesign sustainable teacher preparation programs in colleges of education to include integrated training on the use of innovative teaching strategies and the employment of sustainable technology, in addition to promoting sustainable values such as environmental awareness and equality. With the need to provide an educational environment that encourages critical thinking and problem solving, with a focus on developing teachers' skills in managing classrooms and the learning environment in sustainable ways.

Recommendation:

Based on the results of the study, the study recommends developing sustainable teacher preparation programs in colleges of education to include modern educational and technical components, such as integrating sustainable development topics into curricula, providing practical training on the use of digital tools to teach sustainability issues, and developing teachers' skills in managing the classroom environment in ways that encourage effective participation. Cooperation between colleges and

various educational institutions should also be enhanced to achieve integration between professional standards for teaching and SDGs 2030.

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