21. Yüzyıl Öğretmenlerinde Soft Becerilerin Geliştirilmesi: Sürdürülebilir Kalkınma Amaçlarıyla Uyumlu Nitel Bir Sentez

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Özet

21. yüzyılda öğretmenlerin; öğrenci katılımını ve öğrenmeyi artırmak için iletişim, iş birliği, uyum sağlama becerisi, duygusal zekâ ve liderlik gibi soft becerilere sahip olması gerekmektedir. Bu yetkinlikler, özellikle Sürdürülebilir Kalkınma Amaçları'ndan (SKA) SKA 4 (Nitelikli Eğitim), SKA 8 (İnsana Yakışır İş ve Ekonomik Büyüme) ve SKA 10 (Eşitsizliklerin Azaltılması) ile örtüşmekte ve öğretmen eğitimindeki önemlerini pekiştirmektedir. Bu çalışma, öğretmen eğitimi bağlamında temel soft becerileri, bu becerilerin eğitim süreçlerine entegrasyonunu ve etkili geliştirme stratejilerini, akademik literatürün nitel bir sentezi yoluyla incelemektedir. Bulgular, altı temel soft beceriyi ortaya koymaktadır: (1) İletişim, (2) İş Birliği, (3) Eleştirel Düşünme, (4) Uyum Sağlama, (5) Duygusal Zekâ ve (6) Liderlik. Deneyimsel öğrenme, mentorluk, mesleki gelişim programları ve kültürel açıdan duyarlı eğitim gibi stratejelerin bu becerileri etkili bir şekilde geliştirdiği tespit edilmiştir. Ancak, kurumsal engeller, değişime direnç ve yetersiz değerlendirme araçları bu becerilerin uygulanmasını zorlaştırmaktadır. Bu zorlukları aşmak için çalışma, soft becerilerin öğretmen eğitimi programlarına yerleştirilmesini, teknoloji destekli öğrenme yaklaşımlarının kullanılmasını ve kapsamlı değerlendirme araçlarının geliştirilmesini önermektedir. Soft becerilerin SKA'larla uyumlu şekilde geliştirilmesi, öğretmenlerin etkililiğini, öğrenci başarısını ve eğitimin sürdürülebilirliğini artırmaktadır. Bu çalışma, soft becerilerin öğretmen eğitimine entegre edilmesine yönelik yapılandırılmış bir çerçeve önermesi, yöntemsel boşlukları doldurması ve sistematik değerlendirme araçları ile politika reformlarını savunması açısından araştırma literatürüne özgün katkılar sunmaktadır.

Anahtar Kelimeler: Soft Beceriler, 21. Yüzyıl Öğretmenliği, Öğretmen Eğitimi, Sürdürülebilir Kalkınma Amaçları (SKA'lar), Hizmet Öncesi Öğretmenler, Hizmet İçi Öğretmenler.

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Developing 21st-Century Soft Skills in Teachers: A Qualitative Synthesis Aligned with Sustainable Development Goals

Abstract

In the 21st century, educators need soft skills such as communication, cooperation, flexibility, emotional intelligence, and leadership to improve student engagement and learning outcomes. These abilities correspond with the Sustainable Development Goals (SDGs), namely SDG 4 (Quality Education), SDG 8 (Decent Work), and SDG 10 (Reduced Inequalities), highlighting their significance in teacher education. This research examines critical soft skills, their incorporation into teacher training, and efficient development methodologies using a qualitative synthesis of scholarly literature. The findings delineate six essential soft skills: (1) Communication, (2) Collaboration, (3) Critical Thinking, (4) Adaptability, (5) Emotional Intelligence, and (6) Leadership. Methods like experiential learning, mentoring, professional development, and culturally relevant training successfully cultivate these talents. Nonetheless, institutional obstacles, reluctance to change, and insufficient evaluation instruments impede their execution. The report recommends integrating soft skills into teacher education courses, using technology-enhanced learning, and creating robust evaluation instruments to tackle these difficulties. Integrating soft skills development with the Sustainable Development Goals improves teacher efficacy, student performance, and educational sustainability. This study offers distinctive additions to the academic literature. It presents a structured framework for incorporating soft skills into teacher training, addresses methodological deficiencies, and promotes systematic assessment techniques and legislative changes to equip teachers for inclusive, future-oriented teaching.

Keywords: Soft Skills, 21st-Century Teaching, Teacher Education, Sustainable Development Goals (SDGs), Pre-Service Teachers, In-Service Teachers.

INTRODUCTION

Definition of Soft Skills and Their Importance in 21st-Century Teaching and Learning

Soft skills include interpersonal, communicative, and social abilities that facilitate productive and harmonious interactions with others. They include many talents such as emotional intelligence, collaboration, flexibility, and problem-solving skills (Dzhurylo et al., 2021; Rozhnova et al., 2024). In 21st-century education, soft skills are increasingly acknowledged as vital for cultivating a comprehensive learning environment that equips students for the intricacies of contemporary life and work (Horváth-Csikós et al., 2023; Ngo, 2024). The significance of soft skills in education is underscored by the transition to collaborative and student-centered teaching methods, necessitating educators to promote both academic knowledge and the cultivation of interpersonal skills in students (Nusrat & Sultana, 2019; Sujová et al., 2021).

Incorporating soft skills into educational frameworks is essential for developing well-rounded people who excel in many situations. As the workforce progresses, employers are increasingly valuing individuals with robust soft skills, acknowledging that technical proficiency alone is inadequate for success in the contemporary labor market (Ivory, 2024; Maulana, 2023). Therefore, educators must provide students with these skills to improve their employability and prepare them for continuous learning (AlAfnan & Dishari, 2024; Pons et al., 2024).

Relevance of Soft Skills in Preparing Teachers for Dynamic Classroom Environments

The significance of soft skills is paramount in equipping instructors for dynamic classroom settings. Educators often contend with intricate social dynamics, address varied student requirements, and cultivate an inclusive educational environment (AlAli et al., 2023; Cottafava et al., 2019). Effective communication, collaboration with peers, and the demonstration of empathy are essential for fostering a supportive educational environment that enhances student engagement and achievement (Farao et al., 2023; Mozgalova et al., 2021).

Furthermore, as classrooms become more diverse, educators must be proficient in understanding and addressing their students' unique cultural backgrounds and learning preferences. This requires a robust foundation

in soft skills, allowing educators to establish connection with students and foster a feeling of belonging in the classroom (Sahar et al., 2024; Yudiono, 2021). Therefore, teacher preparation programs must emphasize the cultivation of soft skills in conjunction with conventional pedagogical training to adequately prepare future educators for the difficulties of modern teaching (Ezenwanne, 2023; Saman & Wirawan, 2024).

Connection of Soft Skills to Sustainable Development Goals (SDGs)
The connection between soft skills and the Sustainable Development Goals (SDGs) is particularly salient in the context of education.

- *"SDG 4: Quality Education"* emphasizes the need for inclusive and equitable quality education for all. By integrating soft skills training into teacher education, educators foster an environment that promotes collaboration, critical thinking, and creativity, all essential for effective teaching and learning (Ahmad et al., 2019; Molefe & Aubin, 2023).

- *"SDG 8: Decent Work and Economic Growth"* highlights the importance of preparing individuals for the modern workforce. As employers increasingly seek candidates with strong soft skills, educational institutions must ensure that their curricula reflect these demands, enhancing their graduates' employability and career prospects (Ezzat, 2017; Yao & Tuliao, 2019).

- *"SDG 10: Reduced Inequalities"* focuses on ensuring equity in education and professional development. By prioritizing soft skills training for all teachers, regardless of their background, educational institutions contribute to a more equitable teaching workforce better equipped to address the needs of diverse student populations (Mukhametkairov et al., 2024; Zoller, 2012).

Purpose and Objectives of the Study
This study explores the development of 21st-century soft skills in pre-service and in-service teachers, focusing on aligning these competencies with the Sustainable Development Goals. The objectives of the study include:

1. Identifying the essential soft skills required for effective teaching in the 21st century.

2. Examining the current practices and challenges in integrating soft skills training into teacher education programs.

3. Proposing strategies for enhancing soft skills development among

teachers to improve educational outcomes and align with the SDGs (Maharbid et al., 2024; Nirmala et al., 2023).

Guiding Research Questions

To guide the exploration of soft skills development in teacher education, the following research questions will be addressed:

1. What are the key soft skills pre-service and in-service teachers must develop for effective teaching in contemporary classrooms?

2. How are soft skills currently integrated into teacher preparation programs, and what challenges do educators face in this process?

3. What strategies should be implemented to enhance the development of soft skills among teachers, and how do these strategies align with the Sustainable Development Goals?

THE ORETICAL FRAMEWORK

The cultivation of soft skills in educators is based on many theoretical frameworks that highlight interpersonal competence, professional flexibility, and student-centered learning. This framework integrates constructivist learning theories, socio-emotional intelligence theories, and workforce preparedness models, linking them with the Sustainable Development Goals (SDGs) to formulate a holistic approach to soft skills development in teacher education.

Constructivist Learning Theories and Teacher Soft Skills Development

Constructivist theories, notably Jean Piaget's cognitive constructivism (1972) and Lev Vygotsky's social constructivism (1978), provide a robust framework for incorporating soft skills into teacher education. These ideas indicate that educators must not only impart information but actively cultivate learning situations, necessitating soft skills such as communication, teamwork, and adaptation (Horváth-Csikós et al., 2023).

*   ***Piaget's Perspective:*** Cognitive constructivism emphasizes that learning is an active meaning-making process. Teachers must develop critical thinking and adaptability to guide students through problem-solving and inquiry-based learning.

*   ***Vygotsky's Perspective:*** Social constructivism highlights the role of collaborative learning and scaffolding. Teachers must foster teamwork, communication, and emotional intelligence to create student-centered learning environments.

Socio-Emotional Intelligence and Soft Skills

The incorporation of Daniel Goleman's Emotional Intelligence (EI) Theory (Goleman, 1995) is essential for comprehending how educators develop and use soft skills. Emotional intelligence has five fundamental components: self-awareness, self-regulation, motivation, empathy, and social skills (Goleman, 2006), all crucial for successful pedagogy and learning.

- Self-awareness and self-regulation help teachers manage stress and emotions, improving their adaptability and resilience in dynamic classroom settings.

- Empathy and social skills are critical for understanding diverse student needs, aligning with SDG 10 (Reduced Inequalities) by promoting inclusive education (Sahar et al., 2024).

Workforce Readiness and Soft Skills Development

The 21st-Century Skills Framework (P21 Partnership for 21st Century Learning, 2007) emphasizes critical thinking, creativity, cooperation, and communication as vital for professional preparedness. This paradigm corresponds with the requirements of contemporary educators tasked with preparing students for a changing workforce (Maulana, 2023). Educators must exemplify these abilities professionally to improve student learning results.

- ***Alignment with SDG 8 (Decent Work and Economic Growth):*** Soft skills such as leadership, teamwork, and communication increase teacher employability and career progression in diverse educational settings (Ivory, 2024).

- ***Professional Development and Lifelong Learning:*** Institutions must embed soft skills training in teacher education programs to ensure long-term professional competency (Lent et al., 2023).

The Sustainable Development Goals (SDGs) and Soft Skills Development in Teachers

Teacher education must align with global goals to ensure sustainable, inclusive, and equitable education. The SDG framework provides a broader context for soft skills integration in pre-service and in-service training:

- ***SDG 4 (Quality Education):*** Enhancing collaborative and communication skills in teachers fosters student engagement and equitable learning opportunities (Ahmad et al., 2019).

- ***SDG 8 (Decent Work and Economic Growth):*** Strengthening edu-

cators' soft skills prepares them for workforce challenges and makes them adaptable professionals (Ezzat, 2017).

- **SDG 10 (Reduced Inequalities):** Emotional intelligence and culturally responsive teaching skills bridge learning gaps for marginalized student groups (Mukhametkairov et al., 2024).

Theoretical Model for Soft Skills Development in Teachers

A comprehensive model emerges from this theoretical synthesis, integrating Constructivist Learning Theories, Emotional Intelligence, Workforce Readiness Models, and SDG Alignment. The model suggests that soft skills are:

- Acquired through experiential learning (constructivism)
- Developed through emotional and social intelligence
- Applied in diverse educational and professional settings for workforce readiness
- Aligned with sustainable education goals for equitable learning opportunities

This theoretical framework is the foundation for implementing soft skills training in teacher education programs, ensuring educators are equipped to foster a dynamic, inclusive, and future-ready learning environment.

METHODOLOGY

This study employed a qualitative synthesis methodology to systematically examine the categories of soft skills essential for 21st-century pre-service and in-service teachers, the strategies employed for their development, and their alignment with Sustainable Development Goals (SDGs). A qualitative synthesis approach was considered appropriate for exploring complex educational phenomena, allowing for identifying, analyzing, and synthesizing patterns across diverse research contexts (Sandelowski & Barroso, 2007). The objective was to summarize existing studies and generate interpretive insights regarding best practices for soft skills development in teacher education aligned with global sustainability targets.

Research Design

A qualitative synthesis framework was selected to facilitate a structured yet flexible analysis of a broad corpus of existing literature. Thematic analysis served as the core analytic technique, enabling the identification of recurring categories and strategies related to soft skills in teacher education.

This design provided a critical and nuanced understanding of the ways soft skills are conceptualized, cultivated, and integrated within educational systems, contributing to the advancement of SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 10 (Reduced Inequalities).

Literature Selection Process
Database Selection and Search Strategy
The literature search was conducted systematically using major academic databases, including Scopus, Web of Science, ERIC, and Google Scholar, ensuring comprehensive and multidisciplinary coverage. Grey literature, such as reports from UNESCO and the OECD and educational policy documents, was also included to capture additional insights not available in peer-reviewed sources. The search strategy employed a combination of controlled vocabulary and free-text terms related to the research focus. Keywords and phrases included: "soft skills in teacher education," "21st-century competencies," "pre-service teachers," "in-service teachers," "teacher professional development," and "Sustainable Development Goals in education." Boolean operators (AND, OR) effectively combined search terms. Filters were applied to limit the search to studies published within the last fifteen years (2009–2024) and to include only English- or Turkish-language documents.

Inclusion and Exclusion Criteria
Clearly defined inclusion and exclusion criteria were strictly applied throughout the literature selection process to enhance methodological transparency and replicability. The inclusion criteria required studies addressing soft skills within teacher education contexts, focusing on pre-service or in-service teachers. Furthermore, eligible studies needed to propose or evaluate strategies for the development of soft skills and demonstrate an explicit or implicit connection to Sustainable Development Goal (SDG) 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), or SDG 10 (Reduced Inequalities). Conversely, the exclusion criteria eliminated studies focusing on soft skills in non-educational fields without clear applicability to teacher education. Articles not available in full-text form were excluded to ensure a comprehensive content evaluation. Additionally, publications in languages other than English or Turkish were excluded unless reliable translations were accessible. Redundant or duplicate studies identified during the screening process were also removed to avoid repetition and preserve the integrity of the dataset.

Screening and Selection Procedures

The initial search yielded 413 records. Two reviewers independently screened titles and abstracts for relevance. To minimize selection bias, disagreements were resolved through discussion. After removing duplicates and irrelevant studies, 76 full-text articles were assessed for eligibility. Finally, 49 studies were selected for qualitative synthesis based on their rigorous relevance to the study's objectives (PRISMA flow diagram in Figure 1).

Data Extraction and Management

A standardized data extraction form was developed and pilot-tested to ensure consistency. Key information extracted from each study included study context (geographical region, education level, participant profile), categories of soft skills identified, strategies and methodologies for skill development, stated or inferred connections to specific SDGs, research design, and quality indicators of each study. The extracted data were organized in a matrix format to facilitate thematic analysis and cross-comparison across studies.
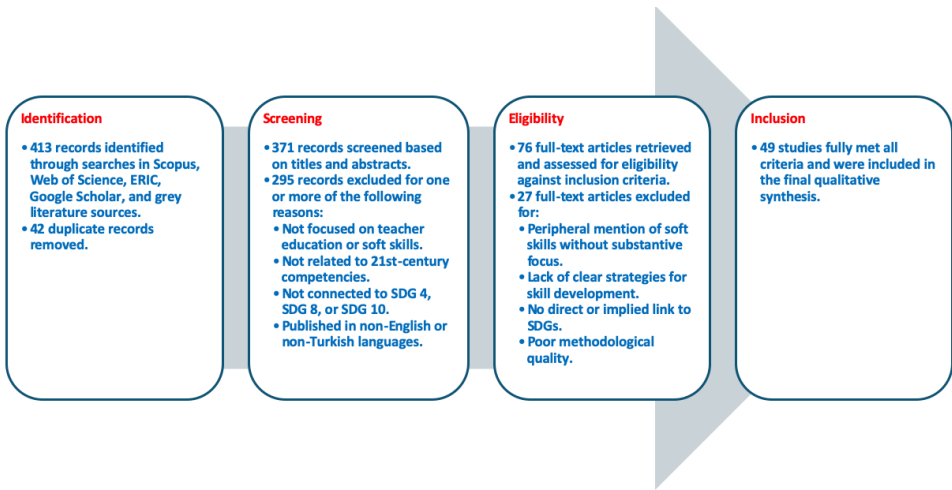
Identification
- 413 records identified through searches in Scopus, Web of Science, ERIC, Google Scholar, and grey literature sources.
- 42 duplicate records removed.

Screening
- 371 records screened based on titles and abstracts.
- 295 records excluded for one or more of the following reasons:
  - Not focused on teacher education or soft skills.
  - Not related to 21st-century competencies.
  - Not connected to SDG 4, SDG 8, or SDG 10.
  - Published in non-English or non-Turkish languages.

Eligibility
- 76 full-text articles retrieved and assessed for eligibility against inclusion criteria.
- 27 full-text articles excluded for:
  - Peripheral mention of soft skills without substantive focus.
  - Lack of clear strategies for skill development.
  - No direct or implied link to SDGs.
  - Poor methodological quality.

Inclusion
- 49 studies fully met all criteria and were included in the final qualitative synthesis.

Figure 1. PRISMA flow diagram detailing the screening and selection process

Analytical Framework

Thematic analysis in this study adhered to Braun and Clarke's (2006) six-phase model to ensure a rigorous and systematic synthesis of findings. First, **familiarization** involved an in-depth reading of the extracted data to develop a comprehensive understanding of the material. Second, **initial coding** was conducted by generating descriptive and analytic codes that

captured significant features related to soft skills categories and development strategies. Third, **theme identification** was undertaken by clustering related codes into broader, coherent themes, such as "communication skills," "adaptability," and "leadership development." Fourth, a **theme review** was conducted to refine the emerging themes, ensuring internal consistency and external distinctiveness. Fifth, **theme definition and naming** were completed by clearly articulating the essence of each theme and its alignment with Sustainable Development Goal (SDG) targets. Finally, a **narrative synthesis** integrated the themes into a cohesive interpretive account, highlighting key insights across the reviewed literature. Themes were cross-referenced with specific SDG targets to illustrate the broader societal relevance of soft skills development in teacher education.

Validity and Reliability Measures
Several rigorous strategies were employed to enhance the qualitative synthesis's credibility, dependability, and confirmability. **Triangulation and cross-verification** were ensured by incorporating multiple sources, including peer-reviewed articles, policy documents, and organizational reports, thereby strengthening the breadth and validity of the findings. **Peer debriefing** was conducted by engaging two external experts specializing in teacher education and sustainable education, who reviewed the interim findings to verify the accuracy and depth of interpretations. An **audit trail** was meticulously maintained, documenting each stage of the research process—from the formulation of the search strategy to the final generation of themes—to support transparency and facilitate reproducibility. Furthermore, **reflexivity** was actively practiced throughout the study, with the researchers engaging in continuous critical reflection to minimize the influence of personal biases on data interpretation and thematic synthesis.

Ethical Considerations
Although no human subjects were directly involved in this study, ethical standards were rigorously maintained. All sources were cited appropriately to ensure intellectual integrity. Selection and synthesis processes were conducted transparently and objectively, and selective reporting was actively avoided to present a balanced and comprehensive view of the current knowledge base.

FINDINGS
Table 1 provides a thematic synthesis of current research on necessary soft skills for 21st-century educators, methods for their development, and

related problems. The results are categorized into three primary topics, each subdivided into pertinent sub-themes, substantiated by academic references, along with the quantity and proportion of sources reviewed. This organized classification offers a thorough examination of the scholarly discussion about the enhancement of soft skills in teacher education and professional practice.

Table 1. The summary table depicting the main themes, sub-themes, and supporting references emerging from the qualitative synthesis in this study

Theme	Sub-theme	References Consulted	n	%
Essential Soft Skills for 21st-Century Teachers	Communication Skills	Bolat & Deneme Gençoğlu, 2024; Suhendra, 2022; Varghese & Mohamedunni Musthafa, 2021; Vilda Ghasya & Kartono, 2022	4	8%
	Collaboration and Teamwork	Alifah & Sukartono, 2023; Sezginsoy Şeker, 2023; Mundo, 2022	3	6%
	Critical Thinking and Problem-Solving	Imran et al., 2023; Natuna et al., 2021; Fitria et al., 2023; Özer & Kuloğlu, 2023	4	8%
	Adaptability and Resilience	Hadiyanto, 2021; Valtonen et al., 2015; Dahri et al., 2023; Shopia et al., 2022	4	8%
	Emotional Intelligence	Komari et al., 2024; Sari et al., 2022; Bahadir et al., 2019; Sanga, 2024	4	8%
	Leadership and Professional Ethics	Ramadhanti, 2024; Yusay et al., 2024; Aminul Razin et al., 2024; Setiawan et al., 2023	4	8%
Essential Soft Skills for 21st-Century Teachers Total			**23**	**47%**
Strategies for Soft Skills Development in Teachers	Integration into Teacher Preparation Programs	Supovitz et al., 2010; Al-Amrat, 2024	2	4%
	Professional Development for In-Service Teachers	Johnston & Tsai, 2018; Rasmitadila, 2023; Lent et al., 2023; Masterson Creber et al., 2019	4	8%
	Mentorship and Peer Collaboration	Coppola et al., 2021; Matovelo, 2024; Jacobs, 2018; Cuervo et al., 2023	4	8%
	Reflective Practices	Geng et al., 2017; Jordan et al., 2018; O'Connor et al., 2011; Yamuragiye et al., 2023	4	8%
	Culturally Responsive and Inclusive Training	Balandya et al., 2022; Isangula et al., 2022; Haynos et al., 2021; Anderson et al., 2021	4	8%
Strategies for Soft Skills Development in Teachers Total			**18**	**37%**
Challenges in Soft Skills Development	Institutional and Systemic Barriers	Lander et al., 2017; Thi Hong Nhung, 2018; Azizatur et al., 2021	3	6%
	Challenges in Integrating Soft Skills into Traditional Frameworks	Cicotto et al., 2014; Ayvaz-Tuncel & Çobanoğlu, 2018	2	4%
	Resistance to Change and Limited Assessment Methods	Feu et al., 2019; Kärner et al., 2021; Knight et al., 2022	3	6%
Challenges in Soft Skills Development Total			**8**	**16%**
Grand Total			**49**	**100%**

Interpretation of the Summary Table
Theme 1 - Essential Soft Skills for 21st-Century Teachers
The research indicated that the largest segment of the examined studies, totaling 23 out of 49 or 47%, concentrated on determining the critical soft

skills necessary for 21st-century educators. In this context, communication skills were highlighted in four studies (8%), emphasizing the imperative for educators to interact proficiently with students, colleagues, and the wider community (Bolat & Deneme Gençoğlu, 2024; Suhendra, 2022; Varghese & Mohamedunni Musthafa, 2021; Vilda Ghasya & Kartono, 2022). Three research (6%) examined collaboration and cooperation, underscoring the significance of cooperative relationships in cultivating helpful learning settings (Alifah & Sukartono, 2023; Sezginsoy Şeker, 2023; Mundo, 2022). Critical thinking and problem-solving abilities were identified in four research (8%), indicating that the capacity to assess circumstances and formulate solutions is increasingly acknowledged as vital for educators (Imran et al., 2023; Natuna et al., 2021; Fitria et al., 2023; Özer & Kuloğlu, 2023). Adaptability and resilience were examined in four research (8%), highlighting the need for educators to adeptly manage change and uncertainty (Hadiyanto, 2021; Valtonen et al., 2015; Dahri et al., 2023; Shopia et al., 2022). Emotional intelligence was highlighted in four research (8%), underscoring the importance of emotional control and empathy in professional teaching practices (Komari et al., 2024; Sari et al., 2022; Bahadir et al., 2019; Sanga, 2024). Leadership and professional ethics were significant themes, examined in four research (8%), underscoring that ethical leadership and professional responsibility are essential elements of contemporary education (Ramadhanti, 2024; Yusay et al., 2024; Aminul Razin et al., 2024; Setiawan et al., 2023). The results demonstrate a robust agreement on the essential soft skills instructors need to thrive in modern educational settings.

Theme 2 - Strategies for Soft Skills Development in Teachers

The second most significant subject was to techniques for cultivating soft skills in educators, addressed by 18 of the 49 research, including 37% of the overall total. Two research (4%) highlighted the need of including soft skills training into teacher preparation programs, indicating that the early integration of these qualities is essential for sustained professional success (Supovitz et al., 2010; Al-Amrat, 2024). Four studies (8%) concentrated on professional development for in-service teachers, underscoring the necessity of continuous learning opportunities to sustain and improve soft skills throughout a teaching career (Johnston & Tsai, 2018; Rasmitadila, 2023; Lent et al., 2023; Masterson Creber et al., 2019). Four research (8%) emphasized mentorship and peer cooperation, underscoring the significance of collegial assistance and role modeling in promoting professional

development (Coppola et al., 2021; Matovelo, 2024; Jacobs, 2018; Cuervo et al., 2023). Reflective practices were a notable emphasis, included in four research (8%), advocating critical self-assessment as a means for ongoing development (Geng et al., 2017; Jordan et al., 2018; O'Connor et al., 2011; Yamuragiye et al., 2023). Furthermore, four studies (8%) examined culturally responsive and inclusive training methodologies, highlighting the imperative of preparing educators to effectively manage diverse educational environments (Balandya et al., 2022; Isangula et al., 2022; Haynos et al., 2021; Anderson et al., 2021). These results indicate that a comprehensive and ongoing strategy is crucial for the successful development of soft skills in both pre-service and in-service educators.

Theme 3 - Challenges in Soft Skills Development

Eight studies addressed the challenges related to the development and integration of soft skills, representing 16% of the total literature examined. Three research (6%) identified institutional and structural impediments, including rigid curriculum, insufficient institutional support, and little focus on soft skills within policy frameworks (Lander et al., 2017; Thi Hong Nhung, 2018; Azizatur et al., 2021). Two research (4%) identified challenges in incorporating soft skills into conventional educational frameworks, highlighting the difficulties of modifying inflexible, content-centric teacher education paradigms to facilitate soft skills development (Cicotto et al., 2014; Ayvaz-Tuncel & Çobanoğlu 2018). Three studies (6%) underscored resistance to change and the absence of effective assessment methods, revealing that teachers' reluctance and the limited availability of validated soft skills measurement tools exacerbate the challenges in fostering these competencies (Feu et al., 2019; Kärner et al., 2021; Knight et al., 2022). These obstacles highlight that, while soft skills are widely recognized, structural and attitudinal transformations are necessary for their complete integration into teacher education and professional development frameworks.

Overall Interpretation

The distribution of results across the three primary topics indicates significant tendencies in the current research environment. Approximately 47% of the research focused on delineating vital soft skills, indicating a strong academic consensus on the competences required for 21st-century education. Over one-third (37%) concentrated on initiatives for skill development, indicating a growing commitment to formulating effective ed-

ucational practices and professional development frameworks. A notable minority (16%) of the studies identified problems, highlighting enduring structural and practical obstacles that must be resolved for effective implementation. The results indicate a dynamic although unequal landscape in which the theoretical significance of soft skills is broadly acknowledged. Nonetheless, the actual incorporation into educational policy and practice is still an ongoing endeavor. These trends underscore the significant importance of soft skills development in attaining Sustainable Development Goals, namely SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 10 (Reduced Inequalities).

RESULTS

Figure 2. Main themes and sub-themes emerging from the qualitative synthesis

Enhancing fundamental soft skills has been a vital focus for teacher education programs seeking to equip educators for the intricate and evolving requirements of 21st-century classrooms. This study investigates the essential categories of soft skills required for effective teaching, evaluates evidence-based strategies for developing these competencies in pre-service and in-service teachers, and examines the ongoing challenges that impede their comprehensive integration into educational systems (Figure 2). It underscores the connection between the cultivation of soft skills and global goals, namely Sustainable Development Goals (SDG 4, SDG 8, and SDG 10), accentuating the need for comprehensive changes in teacher training and professional development.

Theme 1 - Essential Soft Skills for 21st-Century Teachers

In the swiftly changing educational landscape, crucial soft skills have become vital for educators to cultivate successful learning environments, engage students, and manage intricate classroom dynamics. In the context of 21st-century classrooms, which are more diverse and technology-oriented,

educators must exhibit robust communication, teamwork, critical thinking, flexibility, emotional intelligence, and leadership to guarantee student success and comprehensive development (Figure 3). These abilities strongly correspond with global goals, notably the Sustainable Development Goals (SDGs), which highlight excellent education (SDG 4), workforce readiness (SDG 8), and the reduction of disparities (SDG 10). Enhancing these soft skills in pre-service and in-service educators improves pedagogical efficacy, fosters inclusion, and equips students for the challenges of the contemporary world. Consequently, including formal soft skills training into teacher education programs is vital for providing educators with the requisite abilities to lead, motivate, and adapt in dynamic educational environments.
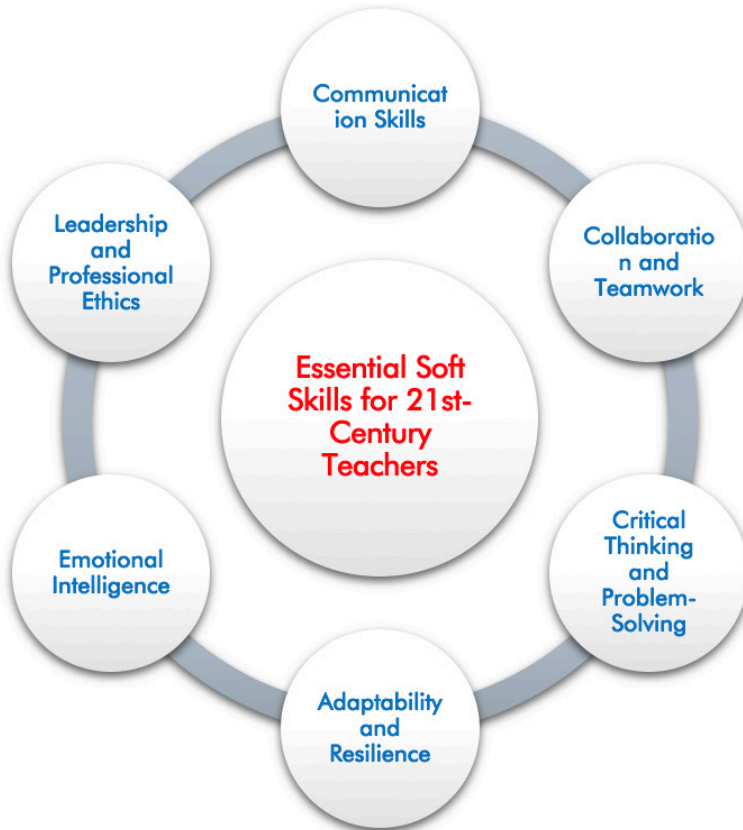
Figure 3. Essential Soft Skills for 21st-Century Teachers

Communication Skills

Communication skills are essential for efficient classroom management, student engagement, and cooperation among educators and students. In a dynamic classroom setting, educators must communicate information, engage in active listening, and promote open conversation to cultivate an inclusive environment that facilitates learning (Bolat & Deneme Gençoğlu, 2024; Suhendra, 2022). Effective communication facilitates information transmission and promotes student engagement and motivation, consequently enhancing overall educational results (Varghese & Mohamedunni Musthafa, 2021; Vilda Ghasya & Kartono, 2022).

The relationship between communication skills and Sustainable Development Goal (SDG) 4, which promotes excellent education, is clear. Effective pedagogical methods that include robust communication skills foster inclusive education by guaranteeing that all students, irrespective of their backgrounds, participate effectively in the learning process (Bolat & Deneme Gençoğlu, 2024). This link with SDG 4 underscores the need for teacher training programs to focus the enhancement of communication skills.

Collaboration and Teamwork

Collaboration and collaboration are vital soft skills that promote cooperative learning and multidisciplinary methods in educational environments. Educators who proficiently interact with colleagues improve their instructional methods and create a more unified educational atmosphere that advantages pupils (Alifah & Sukartono, 2023; Sezginsoy Şeker, 2023). Collaborative efforts among educators facilitate the exchange of resources, ideas, and tactics, resulting in enhanced student results and a more engaging educational experience.

This focus on cooperation corresponds with SDG 8, which focuses on dignified employment and economic prosperity. Employers increasingly prioritize collaboration and collaborative abilities in the contemporary workforce, as several positions need persons to function successfully within team-oriented settings (Mundo, 2022). Consequently, including collaboration and cooperation training into teacher preparation programs is essential for preparing educators with the requisite abilities to excel in contemporary educational and professional environments.

Critical Thinking and Problem-Solving

Critical thinking and problem-solving abilities are essential for new teaching methodologies. In a period marked by rapid transformation and intricacy, educators must possess the ability to assess circumstances, critically appraise information, and formulate effective solutions to issues encountered in the classroom (Imran et al., 2023; Natuna et al., 2021). These abilities augment instructors' efficacy and enable students to engage in critical thinking and creative problem-solving, fostering a culture of inquiry and discovery.

The connections among critical thinking, problem-solving, and Sustainable Development Goal 4 are substantial. By fostering these competencies in educators and learners, educational institutions enhance analytical abilities crucial for addressing the intricacies of the 21st century (Fitria et al., 2023; Özer & Kuloğlu, 2023). This connection underscores the need of incorporating critical thinking and problem-solving training into teacher preparation courses to equip educators for the challenges of modern teaching.

Adaptability and Resilience

Adaptability and resilience are essential soft skills for navigating change in varied and technologically advanced classrooms. As educational settings progress, educators must adapt their instructional tactics and methodologies to successfully address their students' requirements (Hadiyanto, 2021; Valtonen et al., 2015). Adapting to emerging technology, curriculum, and student demographics is crucial for sustaining a happy and effective educational environment.

The significance of this link to SDG 8 is especially remarkable, since the objective underscores the need of equipping people for career shifts. In a swiftly evolving work market, employers increasingly prioritize adaptability and resilience (Dahri et al., 2023; Shopia et al., 2022). Consequently, teacher preparation programs must emphasize the cultivation of adaptation and resilience abilities to guarantee educators are prepared to manage the intricacies of contemporary educational environments.

Emotional Intelligence

Emotional intelligence, including empathy, self-awareness, and proficient interpersonal interactions, is crucial in cultivating strong connections in the classroom. Educators possessing elevated emotional intelligence more

effectively comprehend and address their pupils' emotional requirements, fostering a nurturing and inclusive educational atmosphere (Komari et al., 2024; Sari et al., 2022). This capacity to interact with pupils emotionally not only increases student involvement but also fosters a feeling of belonging and community inside the classroom.

The influence of emotional intelligence on SDG 10, which aims to mitigate inequities, is significant. Through the cultivation of inclusive practices and the promotion of empathy, educators facilitate the establishment of equitable learning environments that address the varied needs of all students (Bahadir et al., 2019; Sanga, 2024). Therefore, including emotional intelligence training into teacher education programs is crucial for equipping educators to properly manage the social and emotional aspects of teaching.

Leadership and Professional Ethics
Leadership and professional ethics are fundamental elements of successful pedagogy. Educators exhibiting robust leadership inspire and excite their pupils while exemplifying ethical conduct (Ramadhanti, 2024; Yusay et al., 2024). This focus on ethical decision-making and leadership corresponds with SDG 4, highlighting the significance of teacher leadership in advancing excellent education.

Teacher preparation programs cultivate leadership skills and ethical behaviors in educators, enabling them to assume leadership positions within their schools and communities. This improves the overall quality of education and fosters the formation of responsible and active citizens (Aminul Razin et al., 2024; Setiawan et al., 2023). Consequently, including leadership and professional ethics training into teacher education curriculum is essential for equipping educators to manage the intricacies of modern educational settings.

Theme 2 - Strategies for Soft Skills Development in Teachers
The successful cultivation of soft skills in educators requires a thorough, organized strategy that incorporates these abilities into both pre-service teacher training and ongoing professional development. In the evolving landscape of 21st-century classrooms, educators must possess communication skills, flexibility, teamwork, and emotional intelligence to create engaging and inclusive learning environments. The incorporation of experiential learning, mentoring, reflective practices, and culturally sensitive training equips both rookie and seasoned educators with the competencies

necessary to address varied classroom difficulties, foster student-centered learning, and advance global educational objectives. These techniques correspond with essential Sustainable Development Goals (SDGs)—SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 10 (Reduced Inequalities)—highlighting the significance of lifelong learning and equality in teacher education. Integrating systematic soft skills training into educational institutions enhances instructors' effectiveness, adaptability, and readiness to address the challenges of modern teaching contexts.

Integration into Teacher Preparation Programs
Incorporating soft skills training into pre-service education programs is crucial for cultivating well-rounded instructors. This integration will be accomplished by using experiential learning techniques, including role-playing and case studies, which provide practical opportunities for teacher candidates to develop and enhance their soft skills in authentic scenarios (Supovitz et al., 2010). These strategies improve the learning experience and equip future educators to adeptly manage the difficulties of contemporary classrooms.

The integration of soft skills training with Sustainable Development Goal (SDG) 4, which prioritizes excellent education, is essential. By improving teacher quality via the development of soft skills, educational institutions guarantee that educators are more prepared to cultivate inclusive and equitable learning environments (Al-Amrat, 2024). This method advantages instructors and enhances student learning results, since teachers with robust soft skills are more inclined to engage and encourage their pupils successfully.

Professional Development for In-Service Teachers
Professional development for in-service educators is essential for the continuous improvement of soft skills. Organized seminars, peer coaching, and micro-teaching opportunities provide educators with the necessary tools and support to enhance their soft skills (Johnston & Tsai, 2018; Rasmitadila, 2023). Professional development programs must be structured to be interactive and collaborative, enabling instructors to learn from one other and exchange best practices.

Technology-facilitated skill development, including online training programs, substantially bolsters lifetime learning prospects for educators

(Lent et al., 2023). By offering flexible and accessible training options, educational institutions guarantee that teachers possess the resources for ongoing enhancement of their soft skills, thus supporting SDG 8, which emphasizes decent work and economic growth through lifelong learning (Masterson Creber et al., 2019).

Mentorship and Peer Collaboration

Cultivating mentor-mentee relationships is an effective approach for enhancing soft skills among educators. Mentorship programs provide beginner educators essential direction and support as they confront the obstacles of teaching (Coppola et al., 2021; Matovelo, 2024). Educational institutions provide a conducive atmosphere for skill modeling and professional development by matching seasoned educators with novice colleagues.

Fostering collaborative initiatives among educators also facilitates peer cooperation, which is vital for the development of soft skills (Jacobs, 2018). This strategy corresponds with SDG 10, which seeks to diminish disparities in professional development opportunities. By providing all teachers with access to mentoring and collaboration opportunities, educational institutions foster equality in teacher training and facilitate the development of a diverse and proficient teaching staff (Cuervo et al., 2023).

Reflective Practices

Promoting reflective behaviors among educators is crucial for enhancing self-evaluation and ongoing development. Employing feedback systems, including peer evaluations and portfolio assessments, assists instructors in pinpointing areas for improvement and advancement (Geng et al., 2017; Jordan et al., 2018). This methodology is especially pertinent to SDG 4, since it fosters comprehensive teacher development and improves overall educational quality.

Reflective techniques enable educators to assume responsibility for their professional growth, cultivating an attitude of continuous learning (O'Connor et al., 2011). By emphasizing reflection and feedback, educational institutions foster a culture of continuous development that advantages both educators and learners, eventually resulting in enhanced educational results (Yamuragiye et al., 2023).

Culturally Responsive and Inclusive Training

Addressing classroom diversity via culturally sensitive and inclusive training is essential for cultivating soft skills in educators. Educational insti-

tutions foster equitable practices that advantage all students by providing educators with the expertise to traverse varied cultural settings (Balandya et al., 2022; Isangula et al., 2022). This strategy corresponds with SDG 10, which underscores the need of mitigating educational inequities.

Integrating culturally responsive training into teacher preparation programs improves instructors' capacity to engage with their students and foster inclusive learning environments (Haynos et al., 2021). This enhances student involvement and encourages constructive social connections and community development inside the classroom, hence leading to a more fair educational environment (Anderson et al., 2021).

Theme 3 - Challenges in Soft Skills Development
Although soft skills are increasingly acknowledged as vital for successful teaching, many institutional and structural obstacles impede their incorporation into teacher preparation programs. Numerous institutions are deficient in resources, governmental backing, and organized frameworks for integrating soft skills training, resulting in disparities in teacher readiness. Conventional teacher education frameworks emphasize technical proficiency and subject matter competence at the expense of interpersonal and reflective abilities, hence hindering the development of communication, flexibility, and cooperation skills. Moreover, educators' reluctance to change and inadequate evaluation frameworks further hinder the execution of soft skills training. These difficulties directly impact the attainment of Sustainable Development Goals (SDGs) 4 and 10, which focus on quality education and the reduction of disparities. Overcoming these obstacles necessitates a methodical and policy-oriented strategy for incorporating soft skills into teacher training and professional development initiatives, guaranteeing that educators are prepared to address the changing requirements of 21st-century classrooms.

Institutional and Systemic Barriers
Numerous institutional and structural obstacles often impede the development of teachers' soft skills. A notable obstacle is the scarcity of resources for soft skills training, which constrains the efficacy of teacher preparation programs (Lander et al., 2017). Inadequate governmental support intensifies this problem, since educational institutions neglect the integration of soft skills development in their curriculum, leading to obsolete training models that do not meet the demands of modern classrooms (Thi Hong Nhung, 2018).

Furthermore, the lack of a unified framework for incorporating soft skills into teacher education results in disparities in training quality and outcomes. Numerous teacher training programs primarily emphasize topic knowledge and pedagogical methods, overlooking the vital soft skills necessary for successful teaching (Azizatur et al., 2021). The insufficient focus on soft skills results in a deficiency in instructors' readiness to interact with varied student groups and navigate dynamic classroom settings.

Challenges in Integrating Soft Skills into Traditional Teacher Education Frameworks

Incorporating soft skills within conventional teacher education frameworks poses distinct obstacles. Numerous current courses predominantly emphasize technical abilities and subject matter proficiency, hence providing less opportunity for the development of interpersonal competences (Cicotto et al., 2014). This limited emphasis produces technically skilled graduates who lack the interpersonal abilities necessary for successful instruction and cooperation in varied educational environments.

Moreover, the inflexible framework of conventional teacher education programs hinders the integration of practical learning techniques essential for the development of soft skills. Methods like role-playing, peer cooperation, and reflective practices need flexibility in curriculum design and implementation, which is impractical within existing educational frameworks (Ayvaz-Tuncel & Çobanoğlu, 2018). Consequently, teacher candidates graduate without the essential soft skills required to excel in contemporary classrooms.

Resistance to Change and Limited Assessment Methods

Resistance to change among educators and administrators hinders the incorporation of soft skills training into teacher education programs. Numerous educators are familiar with conventional teaching techniques and are reluctant to embrace innovative approaches that prioritize the development of soft skills (Feu et al., 2019). This reluctance arises from a lack of comprehension about the significance of soft skills or apprehensions about the efficacy of novel training methodologies (Kärner et al., 2021).

The restricted evaluation techniques for assessing soft skills hinder the demonstration of their worth in educational settings. Conventional assessment methods often emphasize subject knowledge and technical abilities, resulting in the inadequate evaluation and undervaluation of soft skills

(Knight et al., 2022). In the absence of comprehensive evaluation frameworks to evaluate the efficacy of soft skills training, educational institutions find it challenging to substantiate the need of these programs, hence continuing the cycle of disregard.

Implications for Meeting SDG 4 and SDG 10

The difficulties related to the cultivation of soft skills have considerable consequences for realizing the objectives specified in Sustainable Development Goal (SDG) 4 and SDG 10. Educational institutions have challenges in delivering quality, inclusive, and equitable education without a dedicated emphasis on soft skills training within teacher education (Yücel & Yavuz, 2019). This impacts educators and thus influences student learning results and the overall quality of education.

To link teacher education with the Sustainable Development Goals, educational institutions must confront the obstacles to soft skills development and execute initiatives that facilitate the incorporation of these competences into teacher training programs. In doing so, they enhance a more equal and effective educational system that equips teachers for the challenges of the 21st century (Handayani & Sugoto, 2017).

DISCUSSION
Essential Soft Skills for 21st-Century Teachers

The changing educational environment of the 21st century requires instructors to develop and master various soft skills to address the needs of varied classrooms and social expectations. Communication skills are essential for good education, since they enable straightforward information flow, promote conversation, and encourage diversity. Educators who excel in these competencies not only improve their capacity to convey information but also foster an engaging and inspiring educational atmosphere. By promoting inclusive communication methods, educators directly support Sustainable Development Goal (SDG) 4, which prioritizes excellent education for everyone. This underscores the need for communication to be a fundamental emphasis in teacher training programs (Bolat & Deneme Gençoğlu, 2024; Suhendra, 2022).

Collaboration and collaboration enhance communication by fostering a cooperative and supportive educational atmosphere. Teachers who collaborate well with colleagues exchange resources, ideas, and tactics, resulting in enhanced teaching methods. This synergy corresponds with SDG 8's

emphasis on decent employment and economic development by equipping students for the requirements of collaborative professional environments. Integrating collaboration training into teacher education prepares educators to cultivate analogous abilities in their pupils, hence aligning with overarching employment requirements (Sezginsoy Şeker, 2023; Mundo, 2022).

Critical thinking and problem-solving are vital for navigating the intricacies of contemporary schooling. Educators who rigorously evaluate classroom difficulties and devise innovative solutions not only improve their work but also exemplify role models for children. This expertise, essential for creative teaching, corresponds with SDG 4 by equipping students and educators to manage the uncertainties of a swiftly changing environment. Furthermore, cultivating analytical skills in both educators and students guarantees that educational institutions generate persons prepared for the problems of the 21st century (Imran et al., 2023; Fitria et al., 2023).

Adaptability and resilience empower educators to navigate change proficiently in increasingly diverse and technology-enhanced classrooms. As educational situations evolve, whether due to technological breakthroughs or demographic shifts, instructors must be ready to modify their methodologies. This flexibility directly facilitates SDG 8 by equipping people for dynamic career transitions, highlighting the need of educating educators to embrace change and sustain resilience (Valtonen et al., 2015; Shopia et al., 2022).

Emotional intelligence (EI) enhances education by cultivating empathy, self-awareness, and interpersonal comprehension. Educators with elevated emotional intelligence establish stronger connections with their pupils, fostering inclusive and supportive educational settings. This link with SDG 10 underscores EI's contribution to mitigating inequities and ensuring that all pupils are recognized and comprehended. Incorporating emotional intelligence into teacher training programs will improve classroom equality and foster social cohesion (Komari et al., 2024; Sanga, 2024).

Ultimately, leadership and professional ethics guarantee that educators act as role models within their classrooms and communities. Educators with strong leadership abilities and ethical principles motivate pupils and maintain educational excellence, embodying the high standards highlighted by SDG 4. Teacher training programs must include these components to en-

able educators to function as both leaders and ethical exemplars (Ramadhanti, 2024; Yusay et al., 2024).

Strategies for Soft Skills Development in Teachers
Implementing effective ways for cultivating soft skills in educators necessitates the integration of such training into teacher preparation and professional development programs. Pre-service teacher education must emphasize experiential learning techniques, including role-playing and case studies, to enable teacher candidates to use soft skills in real-world contexts. Aligning these methodologies with SDG 4 guarantees that educators are equipped to provide inclusive, high-quality learning environments (Supovitz et al., 2010; Al-Amrat, 2024).

Professional development programs are essential for in-service teachers. Workshops, peer mentoring, and online training modules provide adaptable opportunities for educators to enhance their soft skills. These possibilities correspond with SDG 8 by promoting lifelong learning and assisting instructors in adjusting to the requirements of modern classrooms (Lent et al., 2023; Masterson Creber et al., 2019).

Mentorship and peer cooperation significantly augment the development of soft skills. By cultivating connections between seasoned and beginner educators, educational institutions establish a culture of mentorship and skill demonstration. Collaborative initiatives facilitate peer learning, in accordance with SDG 10 by diminishing disparities in professional development opportunities (Matovelo, 2024; Jacobs, 2018).

Reflective methods promote ongoing self-enhancement among educators. Employing instruments such as peer evaluations and portfolio assessments cultivates a lifelong learning ethos, guaranteeing that educators stay flexible and inventive in their methodologies. These approaches correspond with SDG 4 by prioritizing comprehensive development and enhanced educational results (O'Connor et al., 2011; Yamuragiye et al., 2023).

Culturally sensitive and inclusive training prepares educators to manage varied classroom environments. This technique addresses cultural disparities and fosters equality, so supporting SDG 10, which aims to mitigate educational inequalities. Educators proficient in culturally responsive techniques will cultivate inclusive environments that promote positive interactions and engagement (Balandya et al., 2022; Haynos et al., 2021).

Challenges in Soft Skills Development

The cultivation of soft skills in educators is obstructed by institutional and structural impediments, including inadequate resources and antiquated training methodologies. The absence of comprehensive frameworks for incorporating soft skills into teacher education results in discrepancies in training quality and outcomes. These deficiencies render educators inadequately equipped to address the evolving demands of contemporary classrooms, hence hindering their capacity to fulfill the quality education goals of SDG 4 (Lander et al., 2017; Azizatur et al., 2021).

Incorporating soft skills into conventional teacher education frameworks is similarly difficult owing to inflexible curriculum and an emphasis on technical competence. Experiential learning approaches crucial for the development of soft skills are often overlooked, leading to graduates deficient in interpersonal and collaborative competencies. To tackle these difficulties, it is essential to reformulate teacher education frameworks to emphasize flexibility and diversity (Cicotto et al., 2014; Ayvaz-Tuncel & Çobanoğlu, 2018).

Educators' resistance to change and the inadequate evaluation of soft skills further exacerbate the challenges. Conventional assessment techniques inadequately reflect the influence of soft skills training, complicating the demonstration of their worth. In the absence of effective evaluation techniques, institutions find it challenging to validate the incorporation of soft skills training, hence continuing to overlook this domain (Feu et al., 2019; Kärner et al., 2021).

These difficulties have considerable ramifications for the attainment of SDG 4 and SDG 10. Overcoming these obstacles requires comprehensive initiatives to integrate soft skills training into teacher education and professional development programs. By surmounting these challenges, educational institutions foster a more fair and efficient system that equips educators for the exigencies of the 21st century (Yücel & Yavuz, 2019; Handayani & Sugoto, 2017).

Implications for Policy and Practice
Recommendations for Embedding Soft Skills Training in Teacher Education and Professional Development Programs
To successfully include soft skills training in teacher education and professional development programs, educational institutions should implement

a holistic strategy that incorporates these abilities across the curriculum. This include the creation of targeted modules emphasizing soft skills, like communication, teamwork, and emotional intelligence, which are vital for successful instruction (Ngo, 2024). Moreover, experiential learning techniques, like role-playing, simulations, and case studies, need to provide educators with practical chances to develop and enhance their soft skills in authentic scenarios (Ndayisenga et al., 2020).

Additionally, continuous professional development programs must be structured to enhance soft skills training for current educators. Organized workshops, peer mentoring, and micro-teaching sessions promote the ongoing development of these skills (Williams et al., 2006). By emphasizing soft skills in both pre-service and in-service training, educational institutions prepare teachers to effectively address the requirements of contemporary classrooms and cultivate an inclusive learning environment that corresponds with Sustainable Development Goal (SDG) 4, which highlights quality education (Alruwaili et al., 2020).

Role of Governments, Educational Institutions, and Stakeholders in Aligning Teacher Education with SDGs

Governments, educational institutions, and stakeholders play a vital role in connecting teacher education with the Sustainable Development Goals (SDGs). Policymakers should promote the incorporation of soft skills training in teacher preparation programs and commit resources to facilitate these efforts (Price et al., 2021). This entails formulating explicit norms and criteria for the cultivation of soft skills within teacher education curriculum and guaranteeing that all educators have thorough training in these abilities (Gulalai et al., 2024).

Educational institutions need to work with diverse stakeholders, such as community groups, industry partners, and educational associations, to provide a conducive environment for the development of soft skills (Labrague, 2021). By cultivating collaborations that encourage mutual learning and resource exchange, stakeholders improve the efficacy of teacher training programs and support the attainment of SDG 8, which emphasizes dignified employment and economic development via lifelong learning opportunities (Clarke et al., 2019).

Strategies for Scaling Successful Practices and Promoting Sustainability in Teacher Training

To expand effective methodologies in soft skills development and enhance sustainability in teacher training, educational institutions must adopt a systematic strategy that encompasses ongoing assessment and refinement of training programs (Hasanabadi et al., 2023). This will be accomplished by implementing feedback systems that enable educators to evaluate the efficacy of soft skills training and make necessary modifications depending on their experiences and results (Aase et al., 2014).

Furthermore, the incorporation of technology-based solutions, like online training modules and digital collaboration platforms, improves the accessibility and scope of soft skills training programs (Lestari et al., 2020). Educational institutions use technology to provide flexible learning options that address the varied requirements of educators and foster continuous professional growth (Wynn, 2024).

Establishing a culture of cooperation and support among educators is crucial for the ongoing development of soft skills. Promoting mentoring and peer cooperation cultivates an atmosphere in which educators feel empowered to exchange experiences and acquire knowledge from one other (Chetty et al., 2024). This collaborative method strengthens individual teaching skills and fosters a collective endeavor to elevate the overall quality of education, in accordance with SDG 10, which seeks to mitigate educational inequities (Jeppu et al., 2023).

Future Directions for Research
Gaps Identified in the Current Literature

Notwithstanding the increasing acknowledgment of the significance of soft skills in education, several deficiencies in the existing literature need more exploration. A critical topic is the need for longitudinal research investigating the influence of soft skills on teaching results. Although several studies have examined the short-term impacts of soft skills training, there is a deficiency of research investigating how these abilities affect long-term teaching efficacy and student learning outcomes (Fernández-Arias et al., 2021). Comprehending the enduring effects of soft skills development offers significant insights for educational institutions aiming to improve their teacher training programs.

Moreover, there is an urgent need to investigate the development of soft skills across various cultural and socioeconomic situations. The majority of current research has concentrated on certain groups or localities, so limiting the generalizability of the results (Hinojosa et al., 2024). Examining the impact of cultural and socioeconomic variables on the cultivation and perception of soft skills enhances the formulation of inclusive and effective training techniques that address the requirements of all educators, especially in marginalized groups.

Potential Research on Innovative Assessment Tools for Soft Skills Training

A interesting direction for future study is the creation of novel evaluation instruments for assessing soft skills training. Conventional evaluation techniques often inadequately reflect the subtleties of soft skills, which are intrinsically difficult to measure (Lan, 2023). Investigating alternate assessment methodologies, including peer evaluations, self-assessments, and performance-based assessments, may provide a more thorough comprehension of the development of educators' soft skills (Usman et al., 2023).

Moreover, incorporating technology into assessment processes facilitates more dynamic and participatory assessments of soft skills. Digital portfolios and simulation-based examinations provide insights into the use of instructors' soft skills in practical contexts (Mallillin et al., 2022). Creating effective assessment instruments would improve the evaluation of soft skills training and boost teacher education programs.

Investigation of the Direct Impact of Soft Skills on Achieving SDG Targets

Ultimately, research is required to examine the direct influence of soft skills on the attainment of the objectives specified in the Sustainable Development Goals (SDGs). The correlation between soft skills and educational outcomes is well-documented; however, additional investigation is required to elucidate how these skills facilitate broader societal objectives, including quality education (SDG 4), decent work and economic growth (SDG 8), and diminished inequalities (SDG 10) (Mozgalova et al., 2021). Research investigating the influence of soft skills on the promotion of inclusive educational practices, improvement of employability, and facilitation of equal access to excellent education offers significant insights for

policymakers and educators (Chalela & Britell, 2023). By delineating explicit connections between the cultivation of soft skills and the attainment of SDG objectives, educational institutions more effectively promote the incorporation of these competences into teacher training programs, so enhancing a more sustainable and equitable educational framework.

CONCLUSION
Summary of Key Findings
The study underscores the critical role of soft skills in equipping pre-service and in-service teachers to meet the challenges of 21st-century classrooms while aligning with Sustainable Development Goals (SDGs).

- ***Essential Soft Skills for Teachers***: Communication, collaboration, critical thinking, adaptability, emotional intelligence, and leadership are vital for effective teaching. These skills support inclusive and student-centered pedagogies, enhance classroom management, and foster professional ethics. Strong communication and collaboration align with SDG 4 (Quality Education) and SDG 8 (Decent Work and Economic Growth), while emotional intelligence and adaptability address SDG 10 (Reduced Inequalities).

- ***Strategies for Development***: The integration of experiential learning methods, such as role-playing, case studies, and reflective practices, into teacher education programs provides practical avenues for developing soft skills. Mentorship and peer collaboration further enhance skill acquisition by fostering professional growth and shared learning. Technology-driven solutions, including online training modules, enable flexible and accessible professional development, ensuring lifelong learning opportunities.

- ***Challenges in Implementation***: Institutional and systemic barriers, including limited resources, outdated curricula, and resistance to change, hinder the integration of soft skills training into traditional teacher education frameworks. The lack of effective assessment tools further complicates efforts to evaluate and justify soft skills programs, impeding their prioritization.

- ***Connection to SDGs***: The study establishes a clear link between soft skills development and achieving SDG targets. By fostering inclusivity, preparing teachers for dynamic classrooms, and promoting equitable education, soft skills training directly supports SDG 4, SDG 8, and SDG 10. This alignment demonstrates the necessity of integrating

these competencies into teacher preparation and professional development programs.

- *Recommendations*: Policymakers and educational institutions must adopt comprehensive approaches to embed soft skills training into teacher education. Strategies include designing flexible curricula, leveraging technology, and fostering collaboration among educators. A focus on culturally responsive training and innovative assessment tools is recommended to ensure equitable and effective teacher preparation.

- *Future Directions*: Further research is needed to evaluate the long-term impact of soft skills on teaching outcomes, explore their development across diverse cultural contexts, and design robust assessment frameworks. Investigating the direct contributions of soft skills to achieving SDG targets will enhance advocacy for their inclusion in teacher training programs.

This synthesis emphasizes that prioritizing soft skills in teacher education enhances teacher effectiveness, prepares students for future challenges, and contributes to a more inclusive and sustainable education system.

Answers to the Research Questions

The study explores the development of 21st-century soft skills in pre-service and in-service teachers, aligning these competencies with the Sustainable Development Goals (SDGs). Below are the answers to the guiding research questions.

1. What are the key soft skills pre-service and in-service teachers must develop for effective teaching in contemporary classrooms?

The study identifies several essential soft skills that teachers must develop to be effective in 21st-century classrooms:

- *Communication skills:* Critical for classroom management, student engagement, and collaboration with peers.

- *Collaboration and teamwork:* Necessary for fostering cooperative learning environments and engaging with colleagues.

- *Critical thinking and problem-solving:* Helps teachers make informed decisions and adapt to diverse classroom challenges.

- *Adaptability and resilience:* Enables teachers to respond effectively to changing educational landscapes, including technological advancements.

- *Emotional intelligence:* Supports positive teacher-student relationships and enhances inclusivity in classrooms.

- *Leadership and professional ethics:* Ensures that educators serve as role models and uphold educational integrity.

These skills align with SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 10 (Reduced Inequalities), emphasizing their importance in fostering equitable and sustainable education.

2. How are soft skills currently integrated into teacher preparation programs, and what challenges do educators face in this process?

Soft skills integration into teacher preparation programs occurs through:

- *Experiential learning methods:* Role-playing, case studies, and reflective practices provide hands-on experience.

- *Mentorship and peer collaboration:* Facilitates knowledge-sharing and professional growth.

- *Technology-driven learning:* Online training modules and virtual simulations enhance skill development.

Challenges in soft skills integration include:

- *Institutional and systemic barriers:* Limited resources and outdated curricula hinder soft skills training.

- *Resistance to change:* Many educators and administrators prefer traditional teaching methods.

- *Lack of effective assessment tools:* Difficulty in measuring soft skills development leads to reduced prioritization.

3. What strategies should be implemented to enhance the development of soft skills among teachers, and how do these strategies align with the Sustainable Development Goals?

The study recommends several strategies for strengthening soft skills development:

- *Redesigning teacher education curricula:* Embedding soft skills training into coursework and practicum experiences.

- *Leveraging technology:* Implementing AI-driven assessments and digital learning platforms for skill-building.

- *Encouraging professional collaboration:* Establishing peer mentoring programs and professional learning communities.

- ***Developing culturally responsive training:*** Ensuring programs consider diverse backgrounds and teaching contexts.

Alignment with SDGs:

- ***SDG 4 (Quality Education):*** Enhancing teacher competencies leads to better student outcomes.

- ***SDG 8 (Decent Work and Economic Growth):*** Prepares teachers for evolving educational and employment landscapes.

- ***SDG 10 (Reduced Inequalities):*** Supports inclusive teaching practices, benefiting marginalized students.

The study confirms that soft skills are critical for effective teaching and must be systematically integrated into teacher education programs. Innovative strategies, including curriculum redesign and technology adoption, need to address challenges such as institutional barriers and a lack of assessment tools. By aligning soft skills development with SDGs, educational institutions can contribute to a more sustainable and inclusive future.

Limitations

This study on developing 21st-century soft skills in pre-service and in-service teachers has several limitations that should be considered when interpreting the findings.

- ***Scope of the Literature***: The study relies on existing literature, which may not fully represent all global perspectives on soft skills development in teacher education. Most of the included studies are concentrated in specific regions or educational systems, potentially limiting the generalizability of the findings across diverse cultural and socioeconomic contexts.

- ***Lack of Empirical Evidence***: While the study identifies key themes and strategies for soft skills development, much of the evidence comes from qualitative syntheses or cross-sectional studies. The absence of robust longitudinal data limits the ability to assess the long-term impact of soft skills training on teacher effectiveness and student outcomes.

- ***Dependence on Self-Reported Data***: Many studies analyzed in this synthesis rely on self-reported data from teachers or teacher candidates. Such data may be subject to biases, including overestimation of competencies or alignment with social desirability, which could impact the reliability of the conclusions.

- ***Focus on Theoretical Frameworks***: Although the study highlights the connection between soft skills and Sustainable Development Goals (SDGs), practical implementation frameworks remain underdeveloped. Limited evidence exists regarding how these strategies should be systematically integrated into teacher education programs and scaled across various educational settings.

- ***Assessment Challenges***: The study notes the absence of standardized tools to evaluate soft skills, making it difficult to measure the effectiveness of training programs. This limitation hinders the ability to draw definitive conclusions about the value of soft skills development in meeting educational and professional goals.

- ***Technological and Resource Constraints***: Recommendations for technology-driven training and experiential learning methods may not be feasible for institutions with limited financial or technological resources. These constraints particularly affect schools and teacher preparation programs in low-income or underserved areas, restricting their ability to implement suggested strategies.

- ***Potential Resistance to Change***: Integrating soft skills training into traditional teacher education frameworks faces resistance from educators and administrators accustomed to conventional teaching methods. The findings highlighted this resistance, but it remains underexplored in terms of how it should be systematically addressed.

These limitations suggest a need for further empirical research to address gaps in understanding the effectiveness, scalability, and assessment of soft skills training in teacher education. Future studies should aim to explore diverse contexts, incorporate longitudinal designs, and develop innovative, culturally responsive, and resource-sensitive approaches to overcome these challenges.

DECLARATIONS

Ethics Committee Approval: This study did not involve human participants, experimental interventions, or data requiring formal ethical approval. However, all ethical considerations regarding academic integrity, proper citation of sources, and responsible research practices were followed.

Informed Consent: As this study is based on a qualitative synthesis of existing literature and does not involve human participants, obtaining informed consent was not applicable.

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Genişletilmiş Türkçe Özet
Giriş

21. yüzyılda eğitim anlayışı, öğretmenlerin sadece akademik bilgileri aktarmakla kalmayıp, aynı zamanda öğrencilere sosyal, duygusal ve bilişsel beceriler kazandırmasını gerektirmektedir. Bu bağlamda, soft beceriler (yumuşak beceriler), öğretmenlerin sınıf içi ve sınıf dışı etkileşimlerini yönlendiren kritik yetkinlikler olarak öne çıkmaktadır. Soft beceriler, iletişim, takım çalışması, eleştirel düşünme, duygusal zekâ, uyum sağlama ve liderlik gibi insancıl karakteristik alanları kapsar.

Günümüz iş dünyasında olduğu gibi eğitim alanında da teknik bilgi tek başına yeterli görülmemekte, öğretmenlerin öğrencilerle etkili ilişkiler kurabilmesi ve kapsayıcı öğrenme ortamları oluşturabilmesi için soft becerilere sahip olmaları gerekmektedir. Bu beceriler, Sürdürülebilir Kalkınma Amaçları (SKA'lar) ile de doğrudan ilişkilidir. Özellikle SKA 4: Nitelikli Eğitim, SKA 8: İnsana Yakışır İş ve Ekonomik Büyüme, ve SKA 10: Eşitsizliklerin Azaltılması, öğretmenlerin soft becerileri sayesinde daha eşitlikçi, kapsayıcı ve etkili bir eğitim sisteminin oluşturulmasını desteklemektedir.

Bu çalışma, öğretmenlerde soft becerilerin geliştirilmesini ana fikir olarak incelemekte, öğretmen yetiştirme programlarında bu becerilerin nasıl entegre edilebileceğini tartışmakta ve öğretmenlerde soft becerilerin gelişimini teşvik eden stratejileri ele almaktadır.

Yöntem

Araştırma Deseni ve Amaç: Bu araştırmada nitel sentez (qualitative synthesis) yöntemi kullanılmıştır. Amaç, öğretmenlerin sahip olması gereken temel soft becerileri belirlemek, öğretmen yetiştirme programlarında bu becerilerin geliştirilmesi için kullanılan mevcut yaklaşımları analiz etmek ve SDG'lerle nasıl bağlantılı olduklarını ortaya koymaktır.

Veri Toplama Süreci: Scopus, Web of Science, ERIC ve Google Scholar gibi saygın akademik veri tabanlarında yapılan sistematik taramalar ile öğretmenlerle ilgili soft beceriler üzerine yapılmış güncel araştırmalar belirlenmiştir.

Anahtar Kelimeler: "Öğretmen eğitiminde soft beceriler," "21. yüzyıl öğretmen yeterlilikleri," "hizmet öncesi öğretmen eğitimi," "hizmet içi öğretmen eğitimi," "profesyonel gelişim" ve "SDG'ler ile eğitim."

Çalışmaların seçimi: Çalışmaların seçimi yayın tarihi (son 15 yıl içinde yayımlanmış çalışmalar), öğretmen eğitimi odaklı içerik ve akademik geçerlilik kriterlerine göre yapılmıştır.

Veri Analizi: Elde edilen çalışmalar, tematik analiz (thematic analysis) yöntemiyle incelenmiş ve üç ana tema belirlenmiştir:

- *Öğretmenler için Temel Soft Beceriler* (İletişim, iş birliği, eleştirel düşünme, uyum sağlama, duygusal zekâ ve liderlik).
- *Soft Becerilerin Geliştirilmesi İçin Stratejiler* (Öğretmen yetiştirme programlarına entegrasyon, hizmet içi eğitimler, mentorluk, kültürel farkındalık ve öz yansıtma çalışmaları).
- *Soft Becerilerin Geliştirilmesinde Karşılaşılan Zorluklar* (Kurumsal engeller, değişime direnç, değerlendirme yöntemlerinin eksikliği).
- Bu analiz sayesinde öğretmen soft becerileri üzerine yapılan mevcut araştırmaların güçlü ve eksik yönleri de ortaya konmuştur.

Bulgular

Araştırmanın sonuçları, 21. yüzyıl öğretmenleri için altı temel soft beceriyi ve bu becerilerin geliştirilmesini destekleyen stratejileri göstermektedir.

Öğretmenler İçin Temel Soft Beceriler:
- *İletişim becerileri:* Etkili öğretim süreçleri için gereklidir. Öğrenci-öğretmen etkileşimi, açık diyalog kurma ve kapsayıcı bir öğrenme ortamı sağlama açısından kritik bir rol oynar.

- *Takım çalışması ve iş birliği:* Eğitimde çok paydaşlı bir yaklaşım benimsenmesi gerektiğinden, öğretmenlerin diğer öğretmenler, yöneticiler ve velilerle iş birliği içinde olması gerekir.

- *Eleştirel düşünme ve problem çözme:* Öğretmenlerin eğitimde karşılaştıkları zorlukları çözmeleri ve yenilikçi öğretim stratejileri geliştirmeleri için gereklidir.

- *Uyum sağlama ve esneklik:* Teknolojik gelişmeler ve değişen eğitim sistemleri içinde öğretmenlerin yeni pedagojik yöntemlere hızlı uyum sağlamasını sağlar.

- *Duygusal zekâ:* Öğrencilerin farklı ihtiyaçlarını anlayabilmek, empati gösterebilmek ve kapsayıcı bir sınıf ortamı yaratabilmek açısından kritik öneme sahiptir.

- *Liderlik ve etik değerler:* Öğretmenlerin sınıf içinde ve okul genelinde liderlik rollerini üstlenmeleri, eğitimi yönlendirebilmeleri ve öğrencilere örnek olmaları için gereklidir.

Soft Becerilerin Geliştirilmesi İçin Stratejiler:

- *Öğretmen yetiştirme programlarına entegrasyon:* Soft beceriler, ders programlarına gömülü olarak sunulmalı ve uygulamalı etkinliklerle desteklenmelidir.

- *Hizmet içi eğitim ve profesyonel gelişim programları:* Çalışan öğretmenlerin sürekli eğitimlerle soft becerilerini geliştirmesi sağlanmalıdır.

- *Mentorluk ve akran iş birliği:* Deneyimli öğretmenler ile yeni öğretmenler arasında rehberlik mekanizmaları kurulmalı, akran öğrenimi teşvik edilmelidir.

- *Kültürel farkındalık ve kapsayıcılık eğitimi:* Farklı kültürel geçmişlere sahip öğrencilerle etkili bir şekilde çalışabilmek için öğretmenlerin kültürel duyarlılıkları artırılmalıdır.

- *Öz-yansıtma uygulamaları:* Öğretmenlerin kendi pedagojik yaklaşımlarını değerlendirebileceği geribildirim mekanizmaları oluşturulmalıdır.

Soft Becerilerin Geliştirilmesinde Karşılaşılan Zorluklar:

- *Kurumsal engeller:* Okulların ve eğitim sistemlerinin soft becerilere yeterince önem vermemesi.

- *Değişime direnç:* Geleneksel öğretim yöntemlerine bağlı kalan öğret-

menler ve yöneticiler tarafından gösterilen direnç.

- ***Ölçme ve değerlendirme eksiklikleri:*** Soft becerilerin gelişimini değerlendirmek için etkili ölçüm araçlarının eksikliği.

Bu bulgular, soft becerilerin öğretmen eğitimine entegrasyonunun önemini vurgulamaktadır. Ayrıca, öğretmenlerin soft beceri gelişimini desteklemek için eğitim politikalarının yeniden düzenlenmesi gerektiği ortaya konulmaktadır.

Sonuç

Bu çalışma, 21. yüzyıl öğretmenleri için soft becerilerin hayati önem taşıdığını ve bu becerilerin geliştirilmesi için eğitim sistemlerinde daha fazla çaba harcanması gerektiğini ortaya koymaktadır. Soft beceriler, öğretmenlerin yalnızca akademik bilgi aktaran bireyler olmasının ötesinde, öğrencileri geleceğin iş gücüne ve toplumsal yaşamına hazırlayan rehberler olmalarını sağlar.

Soft becerilerin geliştirilmesi, SDG 4 (Nitelikli Eğitim), SDG 8 (İnsana Yakışır İş ve Ekonomik Büyüme) ve SDG 10 (Eşitsizliklerin Azaltılması) gibi sürdürülebilir kalkınma hedefleriyle uyumludur. Eğitim politikalarının bu hedeflere katkı sağlayacak şekilde yeniden düzenlenmesi ve öğretmen yetiştirme programlarında soft becerilerin sistematik olarak ele alınması gerekmektedir.

Gelecekte, soft becerilerin uzun vadeli etkisini araştıran daha fazla deneysel çalışma yapılması ve bu becerilerin değerlendirilmesine yönelik yenilikçi ölçüm araçlarının geliştirilmesi önerilmektedir.