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Review

Embedding Social Sustainability in Education: A Thematic Review of Practices and Trends Across Educational Pathways from a Global Perspective

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Abstract: Education for Sustainable Development (ESD) is imperative to achieving the Sustainable Development Goals (SDGs), particularly SDG 4 and Target 4.7, which promote inclusive, equitable, and quality education. Nonetheless, while environmental and economic sustainability have been the focus of considerable attention, the social dimension—comprising equity, cultural diversity, human rights, and community resilience—remains under-explored. The present study employed a reflexive thematic review and quantitative analysis of relevant sources, of which there were 67, that were published between 2010 and 2024. The objective of this investigation was to examine the extent to which social sustainability is integrated into ESD. A thorough examination of the existing literature resulted in the identification of four overarching themes: the conceptualization of social sustainability, pedagogical approaches, barriers to implementation, and policy and institutional support. The quantitative findings indicated that conceptualization was the most emphasized theme, receiving 169 weighted points. The implementation of policy support and pedagogical strategies received 82 and 71 weighted points, respectively. A comprehensive review of contemporary trends reveals a persistent escalation in societal awareness concerning social sustainability, accompanied by a pronounced shift towards participatory pedagogical practices following the year 2020. Notwithstanding the progress that has been achieved, challenges such as inflexible curricula and inadequate institutional support persist. This study presents a series of fundamental recommendations designed to optimize educational practice. The most significant of these is the necessity to enhance the pedagogical training of educators. Furthermore, this study calls for the development of curricula that exhibit a high degree of flexibility and interdisciplinary orientation. Furthermore, it is advised that educational policies be aligned with Target 4.7 of the Sustainable Development Goals. This study's findings suggest the need for the enhancement of assessment frameworks with the overarching objective of fostering inclusive and socially sustainable educational practices.

Keywords: Education for Sustainable Development (ESD); social sustainability in education; policy integration for sustainability; challenges in implementation; thematic analysis

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1. Introduction

Social sustainability in education has emerged as a critical yet underexplored area within the broader discourse of sustainable development. While Education for Sustainable

Development (ESD) is widely recognized as a fundamental mechanism for achieving the Sustainable Development Goals (SDGs), particularly SDG 4, which emphasizes the importance of inclusive, equitable, and quality education [1]. The concept of social sustainability in education addresses the existing gaps by fostering inclusive, just, and cohesive societies through targeted educational interventions [2,3]. Social sustainability within ESD is multifaceted and includes critical elements such as social equity, cultural diversity, human rights education, and community resilience. Much of the global discourse has historically prioritized the environmental and economic dimensions of sustainability [4–7]. In contrast, the social dimension which encompasses equity, cultural diversity, human rights, inclusion, and community resilience has received comparatively limited attention in educational policies, curricula, and pedagogical practices [8]. Social sustainability in education refers to the development of educational approaches and institutional structures that foster just, inclusive, and cohesive societies [2,3]; it is grounded in the promotion of social equity, respect for diversity, participatory engagement, and the empowerment of learners to contribute meaningfully to their communities. This dimension is vital to the formation of socially responsible citizens who are capable of navigating complex social realities and advancing social justice. However, despite growing recognition within international policy agendas, social sustainability remains inconsistently defined and inadequately integrated into formal education systems [9]. Although there is a global commitment to sustainable development, many educational systems continue to prioritize academic achievement and economic productivity over social outcomes. This tendency has resulted in significant gaps in the inclusion of social sustainability within curricula [10].

Target 4.7 of the Sustainable Development Goals (SDGs) emphasizes the importance of equipping learners with the knowledge and skills necessary to promote sustainable development. This includes fostering global citizenship, appreciating cultural diversity, upholding human rights, and advancing peace education [11]. However, translating these ideals into practice remains a significant challenge. Traditional education systems often exhibit rigidity, which hampers the integration of socially oriented content into curricula. This inflexibility can impede the development of educational programs that fully embrace the social dimensions of sustainability, such as inclusivity, equity, and community engagement. Thus, there is an increasing need to examine how social sustainability is conceptualized within Education for Sustainable Development (ESD), to identify the most effective pedagogical approaches for its integration, to understand the persistent challenges hindering its implementation, and to explore how policy frameworks can better support its advancement. Accordingly, this review addresses four principal research questions: (1) How is social sustainability conceptualized within ESD? (2) Which pedagogical approaches most effectively support its integration? (3) What are the primary barriers to implementing social sustainability in education? (4) How can policies and institutional frameworks facilitate the incorporation of social sustainability into educational systems? By responding to these questions, this study aims to offer a comprehensive synthesis of international perspectives and best practices, highlighting effective teaching strategies, institutional challenges, and policy recommendations to strengthen the role of social sustainability in ESD.

To address the above questions, this study uses a thematic review methodology to synthesize international perspectives and case studies to evaluate best practices. It identifies effective teaching strategies, such as experiential and community-based learning, and emphasizes the need for curricular flexibility and teacher training. By highlighting both challenges and enablers, this review seeks to inform policies and educational strategies that can promote equity, justice, and inclusion in education for a sustainable future. In addition, this study recommends that policymakers, especially in developing countries, incorporate

social sustainability into curricula and teacher training, drawing on successful global case studies from countries like Finland. It addresses challenges such as rigid curricula and a lack of funding while proposing practical solutions. By promoting equity and inclusion, this study aligns with the Sustainable Development Goals (SDGs), which equip educators and policymakers to prepare future generations for a more sustainable and equitable world.

2. Materials and Methods

2.1. Research Design

This study employed a reflexive and structured thematic review methodology to systematically explore how social sustainability is integrated within Education for Sustainable Development (ESD). The research design prioritized transparency, reproducibility, and thematic rigor, aligning with the recognized best practices for qualitative synthesis [12,13]. In addition to qualitative thematic synthesis, this study incorporated a quantitative thematic analysis, combining interpretative insights with evidence-based measurement approaches [14]. By using a mixed-methods approach, this study aimed to provide a comprehensive, multidimensional understanding of the role of social sustainability in education. To complement the qualitative findings, a quantitative thematic analysis was also performed, following the recognized methodologies for content analysis and systematic reviews [15]. The process involved counting the frequency of major themes across the reviewed documents, assigning weighted scores based on the prominence of each theme (with higher weights assigned to major focuses and lower weights to minor mentions), and mapping thematic trends over three periods: 2010–2015, 2016–2020, and 2021–2024. This method was guided by the frameworks proposed by [16] for content analysis, [17] for evidence-informed systematic reviews, and [18] for systematic trend mapping. The weighted scoring approach provided a nuanced understanding of thematic emphasis over time, while the trend analysis highlighted how scholarly focus on social sustainability evolved across the last decade. Integrating a quantitative content analysis enriched the study's findings by offering measurable evidence alongside qualitative thematic insights.

2.2. Scope and Focus

The present study focuses exclusively on the social dimension of sustainability within Education for Sustainable Development (ESD), exploring key themes such as equity, inclusion, human rights, cultural diversity, participatory learning, and community well-being. It examines how social sustainability is conceptualized and operationalized across early childhood, primary, secondary, and higher education levels, drawing on international experiences and best practices. Geographically, the review adopts a global perspective, analyzing case studies and national initiatives from countries such as Finland, Scotland, Japan, Kenya, and South Africa [19–23]. A structured literature search was conducted using databases such as Scopus, Google Scholar, and the UNESCO Digital Library, covering peer-reviewed journal articles, UNESCO and UNECE reports, national curricula, and educational policy documents. The search focused on works published between 2010 and 2024, using keywords including "Social sustainability in education", "Education for Sustainable Development (ESD)", "Equity in ESD", "Participatory pedagogy and sustainability", "Cultural inclusion and education", and "Human rights education and sustainability. This comprehensive approach ensured that both the scholarly research and policy-oriented documents were analyzed to provide a holistic understanding of how social sustainability is integrated into education systems globally.

2.3. Thematic Analysis

The thematic analysis was conducted following the six-phase reflexive approach proposed by Braun and Clarke [15,24]. The six phases included the following: familiarization with the dataset, generating initial codes, searching for themes, reviewing and refining the themes, defining and naming the themes, and writing the thematic review (See Figure 1).

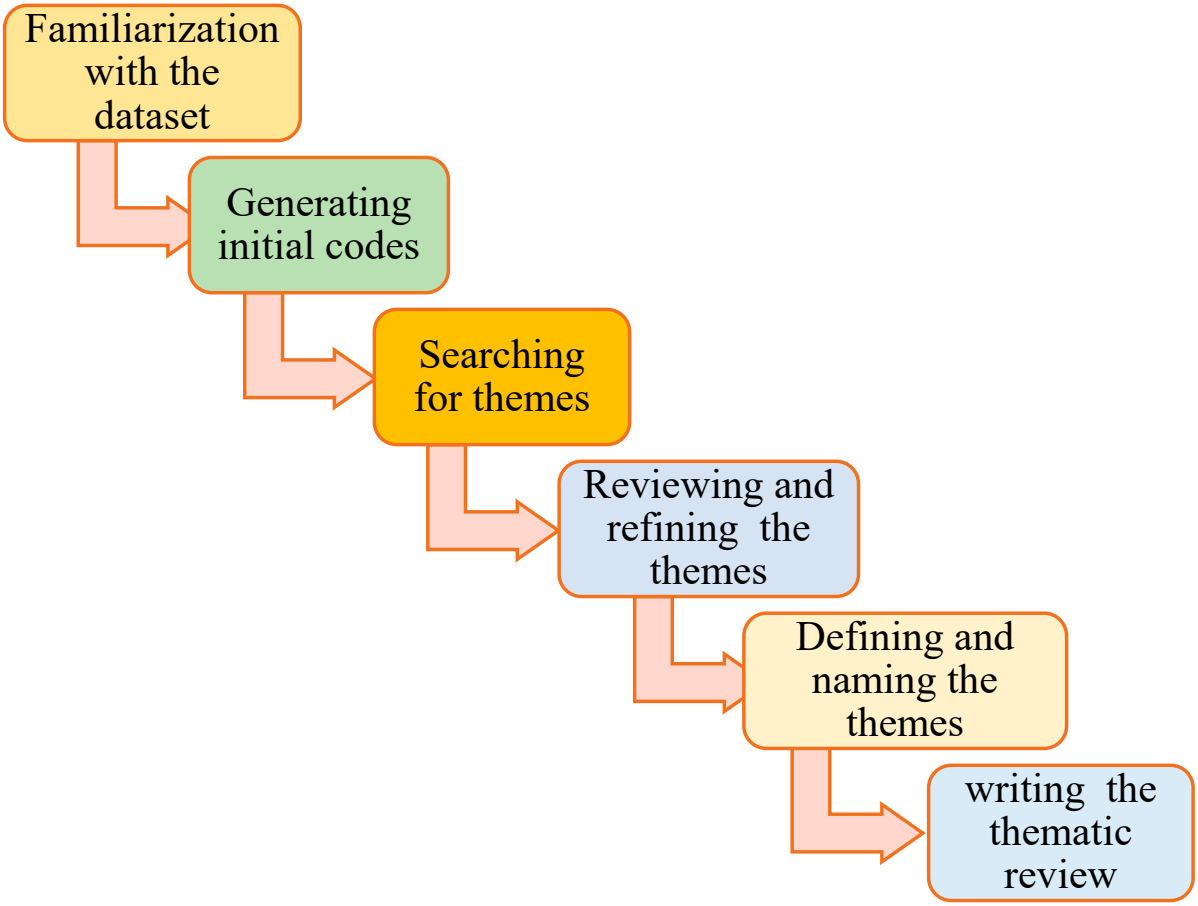

Figure 1. The Thematic Analysis Process: Six Phases Leading to Writing the Thematic Article, adapted from [15,24].

2.4. Conceptual and Analytical Framework

The study's conceptual framework drew on the existing models linking social sustainability to educational processes [3,25], structured as follows: Key Dimensions: equity, inclusion, resilience, and diversity; Educational Strategies: experiential learning, critical pedagogy, community-based learning, and transformative learning [26–28]; and Expected Outcomes: civic engagement, community empowerment, and democracy [2,29] (Refer to Figure 2).

The above conceptual framework figure illustrates the integration of social sustainability into Education for Sustainable Development (ESD). The framework highlights key thematic dimensions (e.g., equity, inclusion, resilience, and diversity), aligned educational strategies, and expected social outcomes, which are adapted from [2,3].

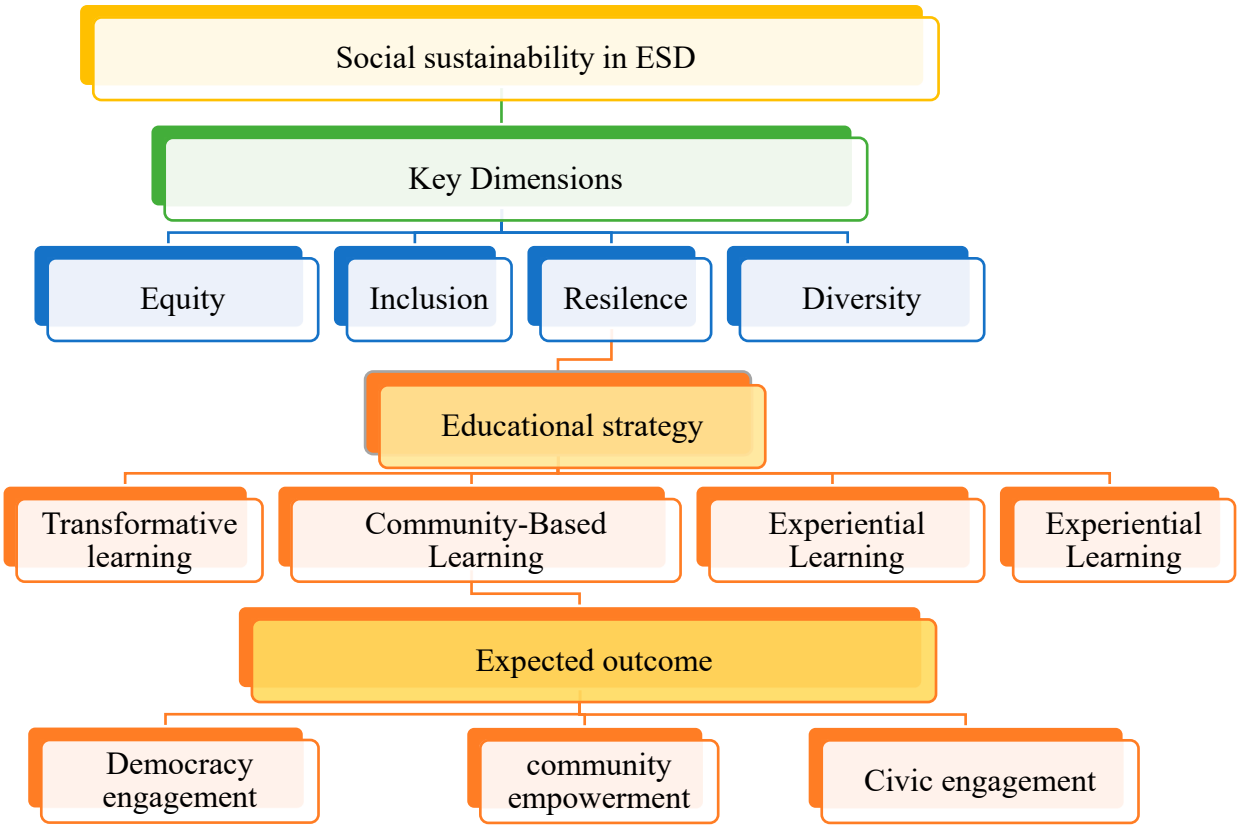

Figure 2. Conceptual framework for integrating social sustainability in ESD.

3. Results

Based on the objectives of this study, the analysis is organized into four major themes: (1) conceptualizing social sustainability in Education for Sustainable Development (ESD), (2) key teaching methods for Sustainable Development in Education (ESD), (3) challenges in implementing social sustainability in Education for Sustainable Development (ESD), and (4) the role of policies and institutional frameworks in integrating social sustainability in education. To support a clearer understanding of the findings, a thematic map has been developed. This map visually illustrates the relationships among the four major themes, capturing how the conceptualization of social sustainability, pedagogical approaches, implementation challenges, and policy and institutional support interact within the Education for Sustainable Development (ESD) frameworks. The visual representation offers a holistic view of these interconnected dimensions, as recommended in comparative qualitative studies [30]. Building on the thematic map, the following sections present a detailed analysis of each theme, aligned with the study's objectives, to provide a comprehensive understanding of how social sustainability is conceptualized, taught, implemented, and supported within the context of Education for Sustainable Development. Figure 3 illustrates the key themes developed to analyze the extent of social sustainability integrated into education.

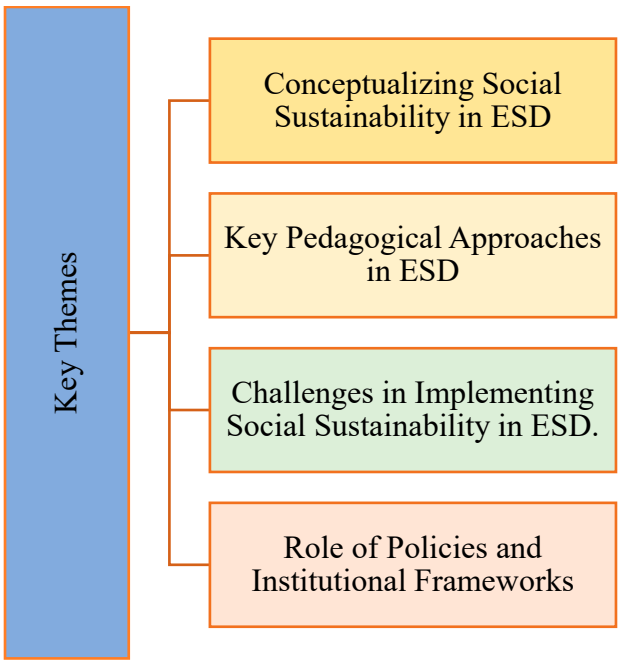

Figure 3. Key themes embedding social sustainability into education.

3.1. Qualitative Thematic Analysis

3.1.1. Conceptualizing Social Sustainability in ESD

Education for Sustainable Development (ESD) is a comprehensive concept that encompasses not only environmental and economic dimensions but also a critical social dimension concerned with human well-being and social equity. In the context of ESD, social sustainability is defined as educational approaches that foster just, inclusive, and cohesive societies. These approaches integrate social justice, equity, and cultural understanding into learning. The concept under scrutiny can be considered an exemplification of the "human" pillar of sustainability. It is a concept that places a significant emphasis on values, relationships, and institutions. The focal point of this concept is to ensure that all individuals can thrive in the present and the future [7,25].

Research suggests that prioritizing social sustainability in education can cultivate responsible citizenship and stronger community bonds among learners. Research suggests that prioritizing social sustainability in education can cultivate responsible citizenship and stronger community bonds among learners [31,32]. In the context of Education for Sustainable Development (ESD), the cultivation of social sustainability entails the meticulous design of educational practices that promote social equality, celebrate cultural diversity, uphold human rights, and fortify community resilience. The integration of principles such as inclusion, social justice, and participatory engagement within teaching and learning processes is pivotal to the realization of socially sustainable education. A socially sustainable approach to education integrates several key elements, each of which must be clearly understood and operationalized in curricula and policy.

3.1.2. Key Elements of Social Sustainability in ESD

The first is Social Equity: Ensuring fairness and inclusion in education signifies the establishment of mechanisms that guarantee equal access to learning opportunities and resources for all students, irrespective of their background. This involves actively addressing disparities (e.g., due to gender, socio-economic status, or disability) and removing barriers to quality education [33,34]. The 2030 Agenda's commitment to "leave no one behind" is reflected in the emphasis on equity, which directs education systems to prioritize

marginalized and vulnerable groups. Next is Cultural Diversity: The incorporation of diverse cultural perspectives, languages, and traditions into the learning process is of paramount importance. Culturally responsive education has been shown to promote mutual respect and understanding among students from diverse backgrounds by recognizing Indigenous knowledge and local contexts [1]. The integration of cultural diversity within the framework of ESD has been demonstrated to facilitate an appreciation for pluralism and global interdependence among learners. This appreciation is considered to be of paramount importance for fostering social cohesion within multicultural societies.

Another element is Human Rights: The integration of human rights education, the principles of democracy, and justice into teaching and learning processes is a critical component of educational reform. This element entails the education of students regarding their own and others' rights and responsibilities, as well as the encouragement of critical thinking about issues such as equality, freedom, and peace [35]. The strategic incorporation of human rights principles within educational curriculum is a pivotal strategy employed by ESD, one that is designed to empower learners to uphold dignity and justice for all individuals, thereby reinforcing the social foundations of sustainable development.

The final element is Community Resilience: The objective is to enhance the adaptability of learners and communities in response to social challenges and disruptions. Education for community resilience is predicated on the cultivation of competencies such as collaboration, empathy, and problem-solving. These skills are imparted to students with the objective of enabling them to make active contributions to the well-being of their communities and increase their capacity to withstand crises [36]. A focus on community resilience in ESD connects learning to real-world social issues, such as poverty, discrimination, or public health, and prepares students to respond constructively to these challenges in their local context.

The elements in question are interconnected, and collectively, they delineate the scope of social sustainability in education. For instance, the cultivation of respect for cultural diversity fosters social equity by affirming all cultural groups, and the education of human rights promotes community resilience by cultivating inclusive, just communities. The efficacy of effective ESD initiatives is evidenced by their comprehensive approach to addressing social elements, which are integrated into curricula with the objective of fostering long-term societal well-being [37,38].

The concept of social sustainability is widely recognized as a multidimensional and value-laden one [39,40]. The social dimension of sustainability, in contrast to environmental metrics (e.g., carbon emissions) or economic indicators, is less tangible and often context-dependent. According to scholars in the field, social sustainability is the least clearly defined of the sustainability pillars. It is often described as "a vague concept" and interpreted differently across disciplines [41,42]. In educational settings, this ambiguity can present challenges, as social sustainability inherently encompasses values (e.g., equity, justice, inclusion) that may be contentious or challenging to incorporate into curricula and teaching practices [43–45]. Educators may encounter challenges in addressing sensitive issues such as race, gender, or inequality. However, these topics are central to social sustainability.

Despite these definitional challenges, Education for Sustainable Development (ESD) is increasingly understood as a transformative approach that advances social sustainability by promoting a global society characterized by justice, equality, and inclusivity. The theoretical underpinnings of this perspective are rooted in social justice education [31], which seeks to ensure the full and equal participation of all groups in society, emphasizing fairness and inclusion as fundamental objectives. Building upon this notion, ref. [46] emphasizes the pivotal role of cultivating critical consciousness among learners. This cultivation enables learners to discern systemic inequities and participate meaningfully in endeavors aimed

at affecting social transformation. In a similar vein, ref. [47] highlights the significance of cultivating critical social justice literacy, defined as an awareness of power structures, privilege, and oppression. This literacy is deemed essential for fostering socially responsible citizens who are equipped to challenge injustices.

In the context of pedagogical applications, ref. [48] asserts the significance of Paulo Freire's critical pedagogy in the domain of ESD, underscoring the imperative of empowering marginalized voices through participatory, dialogic learning methodologies. From a global policy standpoint, ref. [49] demonstrates that Sustainable Development Goal (SDG) 4.7 advocates for education that fosters human rights, gender equality, and global citizenship, aligning closely with ESD's social sustainability objectives.

Furthermore, the integration of sustainability competencies into teaching practices is imperative. The integration of competencies such as social responsibility and cooperation into curricula is advocated for, with the objective being the cultivation of students' knowledge and the values that are indispensable for the establishment of inclusive societies. Ref. [28] proposes an ecojustice education framework, arguing that education should promote diverse, democratic, and sustainable communities by linking ecological integrity with social equity. Achieving social sustainability through education is contingent upon the presence of institutional leadership. Ref. [50] draws attention to the pivotal role that educational leaders play in fostering equitable and inclusive learning environments. This is achieved by dismantling systemic barriers and promoting social justice within school communities.

While there remain conceptual ambiguities, the collective findings of these studies affirm that ESD fosters social sustainability by equipping learners with critical consciousness, values, and skills essential for full and meaningful participation in social life and democratic processes. The objective of the initiative is to establish a society in which all individuals feel secure and are able to live with dignity and freedom. This societal structure would be designed to enable active participation without impediment. This vision is consistent with the fundamental commitment of the 2030 Agenda for Sustainable Development to "leave no one behind", a concept that underscores the imperative to reduce inequalities. According to ref. [1], integrating social sustainability into ESD means embedding social justice, equity, and inclusion principles into educational goals and processes. This conceptual foundation sets the stage for examining how pedagogical approaches can realize these principles in practice.

3.1.3. Key Pedagogical Approaches in ESD

The effective implementation of social sustainability in ESD requires pedagogical approaches that promote student engagement, critical thinking, and transformative learning. This study identifies experiential learning, critical pedagogy, community-based education, and transformative learning as key pedagogical strategies for integrating social sustainability into educational systems. These approaches promote active engagement, critical thinking, and social responsibility among learners, all of which are essential for achieving social sustainability in education [26,51].

Experiential learning is a pedagogical approach that emphasizes hands-on engagement with real-world issues, thereby facilitating profound learning through active participation. This pedagogical approach utilizes two primary strategies: project-based learning and service-learning initiatives. These strategies facilitate students' exploration of social issues such as inequality, discrimination, and community development [27].

Service-learning projects, for instance, motivate students to engage in community service while reflecting on social dynamics, consequently fostering a more profound comprehension of civic engagement and social justice. Experiential learning facilitates the

connection between theoretical knowledge and real-world applications, thereby promoting equity and inclusion by addressing community needs [52].

Despite its effectiveness, experiential learning faces challenges such as high resource demands and time constraints that complicate integration into traditional educational settings [51]. The rigidity of curricula and resistance to non-traditional teaching methods further limit its widespread adoption [53].

Transformative learning is predicated on the notion that there is potential for a shift in the perspectives held by students regarding social issues. This shift is facilitated by encouraging students to question and reassess existing social structures. This process entails introspection and critical thinking, resulting in shifts in attitudes, beliefs, and values concerning social justice, inclusivity, and human rights [54]. By engaging in critical self-reflection, students cultivate a more profound comprehension of social justice and are better equipped to engage in social change. Despite its potential, transformative learning has not been widely adopted in mainstream education due to its non-traditional methods and emphasis on self-reflection, which can be challenging to measure or assess in standard educational settings [55].

The critical pedagogy approach, rooted in the tenets established by Paulo Freire, endeavors to foster student empowerment through the critical analysis and interrogation of societal power structures, inequalities, and issues pertaining to social justice. This approach fosters active participation in social change, particularly within marginalized communities [26]. Students are encouraged to adopt the role of agents of change through dialogical learning, a pedagogical approach that emphasizes collaborative knowledge construction through discussions and the sharing of personal experiences. Critical pedagogy has been demonstrated to enhance students' critical thinking skills and provide them with the tools necessary to challenge existing social norms and work toward a more equitable society [56]. The initiative is congruent with the notion of social sustainability, as it is predicated on the promotion of social justice and cultural empowerment.

Nonetheless, critical pedagogy has the potential to be perceived as confrontational, particularly in conventional educational settings that demonstrate resistance to progressive teaching methodologies. However, institutional resistance persists as a substantial impediment to its comprehensive implementation, particularly in contexts where prevailing power dynamics and entrenched cultural norms hinder progress [56]. Thus, institutional resistance remains a barrier to its full implementation in conservative educational settings.

Community-based learning is a pedagogical approach that underscores the application of knowledge through engagement with local communities and real-world issues. Active learning strategies, such as service-learning projects and case-based learning, effectively encourage students to apply sustainability concepts in authentic contexts, thereby bridging the gap between theoretical understanding and practical experience [51]. This pedagogical approach cultivates students' social responsibility, civic engagement, and profound connection to the tenets of social sustainability. Community-based learning has been demonstrated to enhance students' capacity to link academic material to societal requirements, fostering empathy, critical thinking, and collaboration [57].

This initiative is closely aligned with the objectives of social sustainability, as it fosters a meaningful contribution to community development by learners. However, community-based learning is confronted by logistical challenges, including the establishment of sustainable partnerships with community organizations and the assurance that projects align with both academic and community requirements [58].

Furthermore, the variability of community contexts has the potential to impede the efforts to standardize assessments and ensure consistent learning outcomes across programs. The integration of social sustainability within the framework of ESD necessitates the adoption of educational approaches that are experiential, participatory, and culturally relevant. As previously mentioned by [58], play-based learning and storytelling have been shown to be particularly effective in fostering empathy, social responsibility, and systems thinking among young learners. Participatory learning methods, including role-playing and drama-based education, have been demonstrated to cultivate empathy and social responsibility [59]. Furthermore, there is a growing consensus in the academic community for interdisciplinary and holistic approaches to address the multifaceted challenges of sustainability [60]. The integration of art-based education has emerged as a potent catalyst for cultivating systems thinking and amplifying student engagement with social sustainability [61].

In general, educational approaches such as experiential learning, transformative learning, critical pedagogy, and community-based learning provide concrete pathways for embedding social sustainability into teaching and learning. These institutions transcend the conventional boundaries of education, steering clear of the mere transmission of information and instead fostering critical thinking, empathy, and empowerment among their students. Pedagogical approaches such as these have been shown to foster awareness of social and environmental issues, as well as to cultivate the skills and motivation necessary to become active contributors to a more sustainable and equitable society.

3.1.4. Challenges in Implementing Social Sustainability (SS) in ESD

Despite the growing emphasis on the social sustainability dimension within educational curricula, several challenges have been identified in the implementation of social sustainability in ESD. A recurring issue is the balancing of local and global perspectives, as previously highlighted by [2]. Integrating social sustainability across academic disciplines represents a significant challenge, particularly within higher education institutions, where rigid curriculum structures frequently impede opportunities for interdisciplinary collaboration [62]. Moreover, resistance to non-traditional teaching methods, such as experiential learning, poses further difficulties in implementation [59]. A comprehensive review of the extant literature reveals several best practices that have been identified as effective strategies for addressing the aforementioned challenges. These include fostering critical thinking and dialogue among students [31], and ensuring that teacher training programs are aligned with sustainability competencies [63]. The creation of inclusive and participatory learning environments has been identified as a best practice for addressing the challenges posed by conflicting values and priorities [58]. However, despite these efforts, integrating social sustainability into ESD still faces significant barriers, including rigid curricula, a lack of institutional support, and limited funding [9]. Educators frequently encounter difficulties in reconciling standardized educational objectives with the imperative for participatory and inclusive pedagogical approaches [10].

Additionally, social sustainability is less quantifiable than environmental and economic indicators, which complicates efforts to assess its impact on education. As [9] argues, institutions often prioritize environmental and financial metrics because they are easier to quantify. In a similar vein, ref. [64] underscores that sustainability indicators often overlook social dimensions due to their qualitative and context-specific nature. Furthermore, ref. [9] highlights the complexity of social sustainability, emphasizing its multidimensional and value-laden nature, which hinders the development of universally applicable metrics. Additionally, ref. [46] observes a limitation in the existence of standard benchmarks for

social outcomes, such as equity or community resilience, which hinders the consistency of evaluation efforts within education systems.

Consequently, the integration of social sustainability themes into education is fraught with considerable challenges. Educational institutions frequently encounter structural, cultural, and practical impediments that impede the integration of social equity and justice concerns into academic curricula and school practices. A review of the extant literature and practical experience have identified several key challenges. These include rigid curricula and assessment regimes, limited teacher capacity or training, resistance to change, and the abstract nature of social outcomes. A multitude of interconnected barriers impede the integration of social sustainability into education. A significant challenge that must be addressed is the dearth of teacher training and a lack of confidence in addressing complex social issues, as has been noted by UNESCO [65].

Moreover, refs. [54,66] observe that institutional resistance and systemic inertia frequently impede educational reforms that are aligned with sustainability principles. As [7,10] point out, rigid assessment systems that prioritize standardized testing over holistic learning further constrain innovative pedagogical approaches. Additionally, refs. [3,55] emphasize that inadequate resources, funding discrepancies, and contextual cultural challenges intensify these difficulties, particularly in settings with limited resources.

3.1.5. Role of Policies and Institutional Frameworks in Integrating Social Sustainabilityin Education

Although pedagogical approaches are fundamental to integrating social sustainability into educational practice, their success frequently depends on the existence of supportive policies and institutional frameworks. The implementation of innovative teaching strategies, in the absence of an enabling policy environment and institutional backing, is inadequate for driving systemic change. In this regard, policies and institutional support play a pivotal role in embedding social sustainability across educational systems. It is evident that high-level commitments, strategic frameworks, and institutional mandates provide the necessary direction, resources, and incentives for schools and universities to prioritize the social dimension of Education for Sustainable Development (ESD).

This section examines how global frameworks, and national policies facilitate or sometimes hinder the integration of social sustainability, highlighting examples of countries that have made notable policy advances. The role of policies and institutional support in promoting social sustainability in ESD is critical, as the successful implementation of social sustainability depends heavily on robust institutional and policy frameworks.

In recent years, a growing body of international and national policies has come to acknowledge the significance of ESD, propelling it from the margins to the forefront of educational planning [9]. In a similar vein, national curricula and international frameworks, including the United Nations Decade of Education for Sustainable Development, have exerted a substantial influence on the development of sustainability-focused education policies [67,68].

Institutional frameworks must also support interdisciplinary collaboration. For instance, the successful implementation of sustainability education in European higher education institutions underscores the significance of institutional support [62]. Policies that promote social learning and participatory approaches are vital for fostering long-term engagement with sustainability issues, as demonstrated by [69]. Moreover, the alignment of sustainability education with teacher training programs is instrumental in ensuring that future educators are equipped with the necessary competencies to integrate these principles into their pedagogical practices [63]. The integration of social sustainability into national and institutional policies is a critical factor in facilitating meaningful learning experiences

within education systems. These experiences, in turn, empower students to engage in sustainable and socially responsible actions.

On a global scale, the United Nations and UNESCO have established the agenda for ESD through initiatives such as the UN Decade of Education for Sustainable Development (2005–2014) and its successor, the ESD for the 2030 framework. The 2030 Agenda for Sustainable Development explicitly calls for education that promotes sustainable development, human rights, gender equality, and global citizenship, as outlined in Sustainable Development Goal (SDG) Target 4.7 [1,29,70,71]. Moreover, the Roadmap for ESD 2030, launched by UNESCO in 2020, offers guidance on the implementation of ESD over the present decade, emphasizing social inclusion and the transformation of learning environments [34]. These international initiatives underscore the necessity for educational systems to cultivate green skills in conjunction with values of peace, justice, and inclusion to achieve the SDGs [11].

In response to these challenges, numerous countries have adopted the integration of ESD principles into their national education policies and curricula [33]. For instance, Finland has been a leader in integrating sustainability and social equity into its education system. Finnish legislation guarantees equal access to high-quality education, including free basic education for all, thereby establishing a robust foundation for social sustainability [72]. The 2016 revision of Finland's National Core Curriculum places a strong emphasis on transversal competencies, including "participation, involvement, and building a sustainable future." This revision requires educators to incorporate sustainability themes across various subjects [20].

Similarly, Scotland has explicitly linked ESD with national development goals, drawing from Indigenous sustainability practices and emphasizing social equity. The Scottish Curriculum for Excellence, in conjunction with its Learning for Sustainability approach, integrates sustainability, global citizenship, and outdoor learning across the curriculum [22]; Scotland's revised National Performance Framework (NPF) is congruent with the Sustainable Development Goals (SDGs), with a focus on well-being, inclusive growth, and social cohesion. Government policies encourage schools to engage in sustainability projects, such as renewable energy initiatives and fair-trade programs, reinforcing the connection between education and national sustainability objectives [73].

Japan offers another example of how ESD can be institutionalized through policy and practice. The Japanese government's adoption of ESD within the national curriculum guidelines, coupled with the promotion of its implementation through the UNESCO Associated Schools Network, signifies a significant commitment to the integration of ESD into the nation's educational framework [23]. Japan's Ministry of Education has issued comprehensive guidelines on ESD, which include practical strategies for integrating sustainability concepts, such as the 3Rs (Reduce, Reuse, Recycle), across subjects and fostering school–community partnerships. By integrating ESD into school objectives and providing teachers with structured guidance, Japan has promoted the widespread adoption of sustainable education [53].

It is evident that other countries have also made substantial progress in establishing a nexus between education and sustainable development. Kenya's recent curriculum reforms have incorporated ESD, with the aim of promoting "sustainable livelihoods". Vocational schools have been engaging students in practical activities, such as tree nurseries, waste management, and peer-to-peer health education [21]. Similarly, South Africa has expanded ESD through its Technical and Vocational Education and Training (TVET) programs, offering green skills training to disadvantaged youth, such as solar energy installation, in alignment with national job creation and sustainability goals [19].

However, while nations such as Kenya and South Africa have demonstrated progress in integrating ESD into vocational training and practical activities, substantial gaps persist. In numerous developing countries, the integration of social sustainability into ESD is confronted with augmented challenges due to resource constraints, infrastructural limitations, and socio-economic disparities [69,70].

Beyond national policies, international networks and agreements have played a crucial role in advancing ESD. The United Nations Economic Commission for Europe (UNECE)'s Strategy for the Promotion of Environmental Sustainable Development (ESD) encourages member states to integrate sustainability into education, with a focus on gender equality and peace education [74]. The Global Action Program (GAP) on ESD (2015–2019) promoted the exchange of knowledge among nations, exerting an influence on teacher education reforms in countries such as Germany and China [75]. The UNU's Regional Centres of Expertise (RCE) network also fosters collaboration between educators, policymakers, and community stakeholders [76].

Notwithstanding these advancements, challenges persist. The implementation of ESD in various countries is at different stages, with some still in the early stages and others encountering political resistance when sustainability education is misrepresented as ideological indoctrination [67] (Hopkins & McKeown, 2002). Furthermore, the efficacy of implementation is not solely determined by the existence of policies; factors such as teacher training, financial resources, and the integration of curricula must also be considered [77]. Nevertheless, a review of the successful cases, including those in Finland, Scotland, Japan, and Kenya, suggests that well-structured policies, robust institutional support, and alignment with broader sustainability strategies can facilitate meaningful ESD implementation.

3.2. Quantitative Thematic Analysis

To provide a more comprehensive understanding of the qualitative thematic findings, a quantitative analysis was conducted to assess the strength, frequency, and temporal evolution of each identified theme. In accordance with the methodological guidance set forth in [16], on weighted content analysis, and [18], on-trend mapping in systematic literature reviews, the identification of themes was conducted not only based on the frequency of their occurrence, but they were also subject to a rigorous evaluation process that incorporated their weighted significance. In this approach, major thematic focuses within each source were assigned higher weights than minor mentions, thereby providing a nuanced understanding of thematic dominance across the reviewed studies. Furthermore, the distribution of thematic focus over three distinct periods (2010–2015, 2016–2020, and 2021–2024) was analyzed to identify evolving trends, consistent with the best practices in evidence-informed review methodologies [17]. The results of this quantitative thematic analysis are presented below.

3.2.1. Weighted Occurrence of Themes

The weighted occurrence analysis reveals that the "Conceptualization of Social Sustainability" emerged as the most emphasized theme across the reviewed literature, with a combined weighted score of 169 points. This theme encompassed discourses on equity, cultural inclusion, and global citizenship, thereby indicating a robust scholarly focus on defining and expanding the social dimensions of sustainability.

The category entitled "Policy and Institutional Support" accumulated 82 points, thereby underscoring the significance attributed to the role of governmental and institutional frameworks in the integration of sustainability principles into education systems. The pedagogical approach, which emphasizes participatory and experiential learning

methods, amassed a total of 71 points, underscoring its pivotal function in fostering sustainability competencies. The theme of "Barriers to Implementation", although not explicitly quantified, manifested consistently across studies, signifying a pervasive acknowledgment of challenges such as rigid curricula, inadequate institutional flexibility, and deficient assessment instruments for social sustainability outcomes. As illustrated in Figure 4, the total weighted emphasis of each major theme identified in the literature review is demonstrated, with particular emphasis on the dominant focus areas within the field of Education for Sustainable Development.

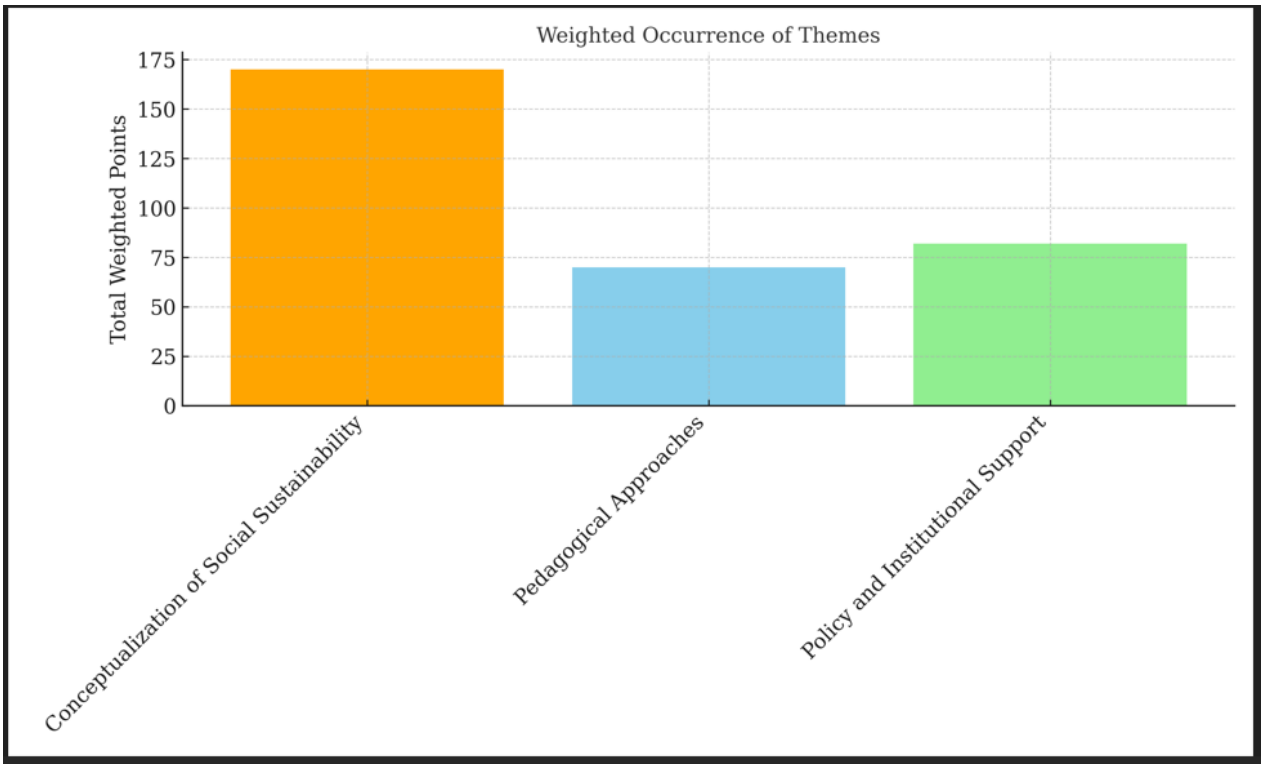

Figure 4. Weighted occurrence of themes across the reviewed literature.

3.2.2. Trends of Themes over Time (2010–2024)

A trend analysis of the literature reveals a steady and growing academic interest in the "Conceptualization of Social Sustainability", with notable increases between each period, rising from 24 sources (2010–2015) to 37 sources (2021–2024)". Pedagogical Approaches" demonstrated the most significant increase, particularly after 2020, reflecting an increasing emphasis on participatory, experiential, and transformative learning methods in sustainability education. The "Policy and Institutional Support" category exhibited a consistent and gradually increasing presence, suggesting an ongoing concern with integrating sustainability principles into policy frameworks. As indicated by the figure, challenges related to "Barriers to Implementation" were consistently embedded across the periods, thereby reinforcing the persistent structural and systemic obstacles faced by educators and policymakers in fully realizing the goals of Education for Sustainable Development (see Figure 5).

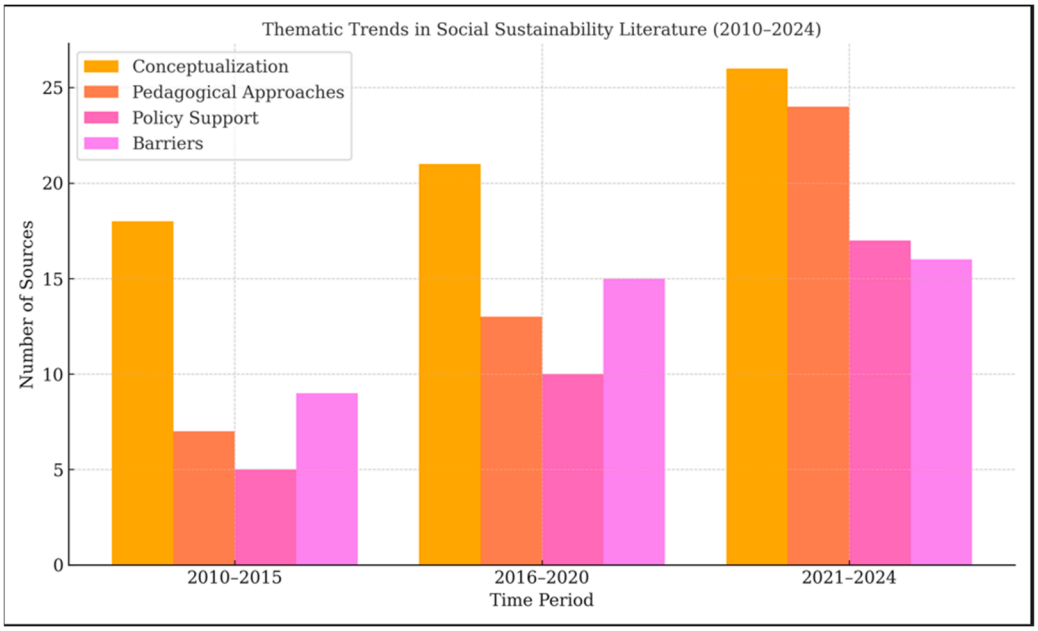

Figure 5. Trends of themes in the literature relates to social sustainability over time (2010–2024).

4. Discussion

This study draws attention to the escalating acknowledgment of social sustainability as a pivotal component within the framework of Education for Sustainable Development (ESD). Although environmental and economic aspects have been extensively incorporated into educational curricula, the social dimension, which encompasses equity, human rights, cultural diversity, and community resilience, remains underrepresented and inadequate [11]. The thematic and quantitative analyses conducted in this review demonstrate a strong scholarly focus on the conceptualization of social sustainability, followed by increasing attention to policy and institutional frameworks and participatory pedagogical approaches. Notwithstanding the aforementioned advancements, entrenched structural and systemic impediments persist in impeding the complete actualization of social sustainability within education systems on a global scale.

The findings affirm that participatory pedagogical approaches, particularly experiential learning, critical pedagogy, and community-based education, play a vital role in advancing social sustainability goals in [57]. Experiential learning strategies, including project-based learning and service learning, have been shown to foster deep engagement by linking theoretical knowledge to real-world social issues, encouraging students to develop empathy, critical thinking, and civic responsibility [27,37]. Conversely, transformative learning methodologies empower students to interrogate entrenched social structures and engage in critical reflection on issues of justice and inclusion, thereby fostering their development as active agents of social transformation [54,77]. Critical pedagogy, rooted in the principles established by Paulo Freire, places significant emphasis on dialogical learning and the democratization of educational environments. This pedagogical approach is designed to equip students with the capacity to interrogate systemic inequalities and to advocate for more equitable societal transformation [26,56]. Nevertheless, despite the proven effectiveness of these approaches, they remain underutilized in many education systems. The persistence of rigid, standardized curricula and a continued preference for traditional, teacher-centered methodologies present significant barriers to broader adoption [46,53]. This incongruity underscores the necessity for enhanced curricular flexibility and institutional support to foster interdisciplinary and student-centered learning experiences.

The integration of social sustainability into education is a multifaceted endeavor that faces significant challenges. A primary challenge identified in this review is the dearth of institutional support and inadequate teacher preparation [50]. Many educators feel inadequately prepared to address sensitive subjects such as inequality, human rights, and cultural diversity, particularly in contexts where professional development opportunities on social sustainability are limited [24]. As [64] emphasizes, the qualitative nature of social sustainability complicates its assessment using conventional metrics, leading to its relative prioritization compared to environmental and economic indicators.

Furthermore, the contextual nature of social sustainability, influenced by cultural, socio-economic, and political factors, results in considerable variability in its interpretation and implementation. Moreover, the contextual nature of social sustainability, influenced by cultural, socio-economic, and political factors, results in considerable variability in its interpretation and implementation across regions [25,39]. While notable advancements have been made in the incorporation of Education for Sustainable Development (ESD) into vocational training and practical activities in developing countries such as Kenya and South Africa, significant challenges persist in other regions due to resource constraints, infrastructural limitations, and socio-economic disparities [9,78].

The analysis reinforces the notion that policy and institutional support play a pivotal role in facilitating the integration of social sustainability into educational institutions. The successful integration of social sustainability into the educational systems of countries such as Finland, Scotland, and Japan has been achieved through the implementation of coherent national policies. These policies have systematically aligned the curricula, teacher training, and institutional mandates with the principles of equity, inclusion, and global citizenship [23,67]. In the context of international frameworks, the United Nations' 2030 Agenda and UNESCO's ESD for 2030 Roadmap have emerged as pivotal sources of guidance, underscoring the imperative to nurture competencies pertaining to human rights, gender equality, peace, and democratic citizenship [1,34].

However, the implementation gaps remain significant. A considerable number of national policies continue to exhibit a paucity of concrete operational strategies, financial resources, and accountability mechanisms that are indispensable for the translation of extensive commitments into manifest educational practices [71]. Furthermore, the weighted thematic analysis demonstrated that although the conceptualization of social sustainability received the highest attention, with 169 points, practical strategies for pedagogy (71 points) and policy integration (82 points) have only recently gained momentum. A subsequent examination of these data over time reveals a gradual escalation in the emphasis on social sustainability, accompanied by a pronounced surge in participatory pedagogical approaches following 2020. The findings indicate that, while awareness of social sustainability has increased, the systemic transformation of education systems to incorporate socially sustainable practices necessitates a more coordinated effort, sustained political will, and context-sensitive implementation strategies.

5. Conclusions

This study emphasizes the critical yet often underemphasized role of social sustainability within Education for Sustainable Development (ESD). Despite the considerable progress achieved through global educational initiatives in integrating the environmental and economic dimensions of sustainability, the social pillar, comprising equity, cultural diversity, human rights, and community resilience, remains deficient in both policy and practice.

A comprehensive review of 80 international sources was conducted to identify the major themes that emerged. This thematic and quantitative review yielded four themes: conceptualizing social sustainability, effective pedagogical approaches, barriers to imple-

mentation, and the role of policy and institutional frameworks. The quantitative thematic analysis confirmed that, while the conceptualization of social sustainability has gained prominence (attaining the highest weighted score of 169 points), practical approaches to pedagogy (71 points) and policy integration (82 points) have only recently received broader attention.

The findings indicate that participatory and experiential pedagogies—such as service-learning, critical pedagogy, and community-based education—are effective in fostering the competencies necessary for social sustainability. Nevertheless, systemic barriers, including inflexible curricula, inadequate institutional support, insufficient teacher training, and challenges in evaluating social learning outcomes, persist in hindering progress.

National policies and institutional frameworks that align educational goals with SDG Target 4.7 have been demonstrated to be crucial enablers. This assertion is supported by the successful models observed in countries such as Finland, Scotland, and Japan. Nonetheless, considerable disparities persist, particularly in developing countries, where resource limitations and socio-economic challenges pose further obstacles.

In conclusion, achieving the full integration of social sustainability into ESD necessitates a coordinated effort to reform curricula, strengthen teacher capacity, promote interdisciplinary approaches, and develop robust assessment tools for social competencies. Future educational policies must prioritize social sustainability alongside environmental and economic goals to ensure that learners are equipped to contribute meaningfully to building inclusive, just, and resilient societies.

6. Recommendations and Future Directions

It is imperative to fortify the training and capacity building of teachers. It is incumbent upon governments and educational institutions to invest in professional development programs that equip educators with the skills to integrate social sustainability into their teaching practices [63]. This includes training on interdisciplinary teaching methods, experiential learning, and critical pedagogy. The promotion of policy alignment with the Sustainable Development Goals (SDGs) is imperative. National education policies must explicitly incorporate social sustainability principles, aligning curricula with SDG Target 4.7, which focuses on education for sustainable development, human rights, and global citizenship [33].

The development of flexible and inclusive curricula is imperative. Educational institutions must develop flexible curricula that facilitate interdisciplinary approaches and student-centered learning methodologies. This approach would enable the integration of social sustainability themes across various subjects and learning levels [79]. In terms of improving assessment frameworks for social sustainability, it is incumbent upon educational policymakers to develop comprehensive evaluation tools to assess students' competencies in social sustainability. These tools must incorporate qualitative and participatory assessments [25]. In relation to conducting empirical research on the identified gaps, it is imperative that future studies direct their efforts toward the empirical research necessary to identify and address the existing gaps in the integration of social sustainability into Education for Sustainable Development (ESD). Higher education plays a strategic role in promoting sustainable development by enhancing human capital, social inclusion, and innovation. As the authors of [80], Krstić et al. (2020), point out, the incorporation of Education for Sustainable Development (ESD) into higher education has the potential to enhance both social sustainability and national competitiveness. Therefore, the integration of the pivotal indicators of social sustainability into higher education curricula has the potential to empower citizens, thereby fostering their ability to become more resilient and competent contributors to sustainable societies.

The implementation of these measures would facilitate the provision of evidence-based strategies aimed at enhancing educational practices and policies. The development of nations that are economically disadvantaged should be accorded with a high priority. The integration of social sustainability into Education for Sustainable Development (ESD) should be a primary focus for developing countries.

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