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Youth Climate Action Community Outreach Framework: A Theoretical Study

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ABSTRACT

Objectives This study aims to develop a theoretical framework that empowers youth to lead community-based climate action and demonstrates how structured guidance and supportive principles can enable sustainable, context-specific impact.

Methods Through conceptual development and operationalization processes, the study formulates the YCACO Framework and examines its applicability using mental-model thought experiments grounded in five country case studies.

Discussion The optimized YCACO Framework provides a structured, community-centered model for youth-led climate action that can be readily applied in real community contexts. The study provides both methodological and practical contributions, offering a promising approach to addressing longstanding gaps in youth climate action research. Although it is constrained by limited youth representation in existing literature and the inherent limitations of thought-experiment methods, the findings nonetheless demonstrate the framework's potential to strengthen and guide youth-led climate action.

Keywords Climate action, *Sustainable Development Goals (SDGs), community outreach, youth leadership, youth empowerment*

Highlights

- ► This is a youth-led theoretical study. Youth researchers took all initiatives and made all decisions throughout the research process.

- ► This study addresses the persistent gap in climate action research: a lack of youth voices.

- ► With a strong emphasis on youth leadership and community context, this study offers a practical guide for young people seeking to take meaningful climate action and create positive change in their communities.

INTRODUCTION

Climate change represents one of the most pressing challenges of the twenty-first century, with its escalating impacts increasingly threatening the safety and well-being of future generations (Chalupka et al., 2023). In this context, youth voices are particularly critical. Baldwin et al. (2023) found that in Australia, 78% of young adults between the ages of 18 and 20 view climate change as a serious concern, compared to only 50% of adults over 60. Despite their passion and determination, youth activists often encounter significant barriers that limit their effectiveness in climate action. Specifically, youth-led initiatives frequently struggle to create lasting impact, even in communities where the effects of climate change are most pronounced (Gutterman, 2024). Externally, youth activists face a lack of institutional support and discrimination in decision-making spaces. Internally, they often grapple with self-doubt and uncertainty about the path forward (Baldwin et al., 2023). While both external and internal obstacles are common, there are successful examples to draw from. Our research team, composed of youth researchers from five continents, seeks to examine these examples and the diverse communities we represent. Our goal is to create a practical, accessible tool that will serve as a roadmap, offering clear direction, providing actionable steps, building
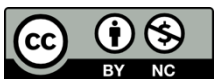
confidence, and empowering global youth leadership and participation in climate action.

THE FRAMEWORK

Framework Methodology

Conceptual Development

For each key element of the YCACO Framework, content was created to define the element and outline potential applications, such as selecting outreach channels through social media or traditional methods. This ensured adaptability across community contexts and outreach models through detailed research and literature review, which made the framework both theoretically sound and practically applicable. A comprehensive review of publicly available peer-reviewed literature formed the theoretical foundation and revealed a gap in youth-led climate action outreach despite "climate action" and "outreach" being common themes. This gap guided the creation of a practical framework tested through simulated case studies, with sources chosen for their relevance to youth engagement, outreach mechanisms, and climate education strategies. By analyzing existing frameworks in climate education and community engagement such as UNESCO's Education for Sustainable Development (ESD), the UNFCCC's youth engagement guidelines, and CBSM models, researchers identified strengths and weaknesses (Motamedi, 2014), incorporated elements like contextual analysis, measurable objectives, and participatory methods (Bradford, 2019), and strengthened their foundation with insights that enhance framework effectiveness (Ris & Radoš, 2024).

Initial key elements were generated from literature reviews, focus group discussions, and expert consultations, with best practices and case studies highlighting critical components. Engagement with community leaders and youth representatives ensured relevance and practicality, and the iterative process refined the list into a comprehensive set of elements. Detailed content for each element was developed using qualitative and quantitative data such as interviews, surveys, and participatory workshops, guided by inclusivity and co-creation. Iterative feedback loops allowed continuous refinement with stakeholder input, resulting in a robust and actionable framework tailored to diverse community contexts. Constructing the framework involved sequencing the elements in a logical order of action rather than importance: beginning with examining the community context, then

articulating objectives, identifying outreach models, selecting outreach channels and finally developing a timeline. This progression ensures users ground their efforts in context, refine goals, align outreach strategies, and organize actions effectively.

Operationalization

One: Thought Experiment. Craik's concept of a "small-scale model" (1967) explains how mental simulations support decision-making through trial and error, with thought experiments using this approach to test hypotheses against mental models of reality (Nersessian, 1993; Yeates, 2004). Although sometimes criticized for being counterfactual and potentially invalid (Irvine, 1991), thought experiments remain valuable when carefully designed, offering a time-efficient and resource-efficient method for optimizing frameworks. This study used thought experiments to simulate climate action scenarios and test the YCACO Framework, making them an effective strategy for examining community outreach under limited resources and consistent with the research goals (Nakade, 2025). By applying thought experiments as both methodological and contextual tools, researchers situated the framework within cultural and social settings to assess realistic applications for youth climate activists, refining it iteratively while maintaining theoretical and practical relevance.

Two: Conducting Case Studies. Thought experiments offer a rigorous and systematic method for testing theoretical frameworks by simulating applications in controlled, imaginative contexts. This approach allowed researchers to assess the YCACO Framework's adaptability across five culturally and socioeconomically distinct countries and to identify its strengths, weaknesses, and potential for real-world impact. Cases were selected based on the regions where researchers spent their youth, enabling them to position themselves as youth climate activists within their national contexts. This ensured accuracy and authenticity, as local researchers could better interpret problems, methodologies, and outcomes than outsiders. The study included cases from Nepal, New Zealand, the USA, the Bahamas, and Moldova, chosen to test the framework in diverse contexts and demonstrate its potential as a globally applicable tool rather than one limited to a single country. Building on Sorensen's (1992) concept that thought experiments test modal consequences, researchers used global case studies of youth-led climate activism to examine framework

reliability, crafting teenaged main characters with local backstories and contexts. The case studies illustrated how different outreach models, such as social media versus radio, were adapted regionally, while also documenting challenges and solutions, ultimately demonstrating that the framework can be a powerful tool for sustainable youth climate action when applied effectively.

Three: Framework Optimization. To increase reliability, five thought experiment cases from the United States, the Bahamas, Moldova, Nepal, and New Zealand were examined, with successes and challenges compared to identify common strategies. Findings were categorized to show which aspects of the YCACO Framework worked effectively and which required improvement (Deneen, 2014; Moulding, 1999; Syed, 2024). Applying theory through these case studies allowed the framework to be tested, refined, and further developed by analyzing both successes and barriers in simulated youth climate action. Obstacles highlighted areas needing improvement, while successes identified strengths, making thought experiments essential for framework optimization (Lynham, 2002). A systematic synthesis of findings involved analyzing cross-country themes, challenges, and strategies, categorizing results, and conducting collaborative discussions. This process produced prioritized recommendations for framework improvement, practical implications for stakeholders, and iterative updates that ensured its adaptability, relevance, and long-term value for future initiatives.

Framework Descriptive Overview

Key Elements (Figure 1)

One: Examining the Community Context. Effective community outreach requires understanding different types of communities and selecting strategies that fit their context, often through either transactional engagement, which focuses on short-term, measurable goals (Carter, 2021; Hauber, 2007), or transformational engagement, which emphasizes long-term change and innovation (McCloskey, 2015). Both approaches play vital roles in outreach (Riesch, 2013). Identifying effective strategies involves understanding community needs (Noble et al., 2016), building trust through direct engagement (Christopher et al., 2008), leveraging diverse communication tools such as social media (Glazier & Topping, 2021), collaborating with local partners (Kohout-Tailor & Klar, 2020), providing

educational opportunities (Sufi et al., 2018), listening to feedback (Mirza et al, 2012), and using storytelling (McCall et al., 2021). Continuous evaluation and adaptation (LaForge, 1984) further ensure that outreach achieves meaningful and lasting community impact.

Two: Articulating the Fundamental Objectives. Identifying the purpose of community outreach is critical for determining engagement and support, with the YCACO Framework distinguishing between purpose-driven and reward-driven action. Youth activists must clearly define objectives to guide their climate action effectively (Eubank, 2023). Reward-driven action, based on the human reward function (O'Doherty, 2004), motivates participation by offering tangible incentives, which can accelerate solutions (Abdelazeem et al, 2022; Daniel, 2019) and has proven effective in contexts such as promoting EV adoption for sustainability (Goetz, 2010; Sinclair & Doelle, 2003). However, Ariely et al. (2005) and Gneezy & Rustuchini (2000) suggest that small incentives can reduce productivity, as shown in carrot-and-stick models, while appropriately designed incentives tied to skill-based tasks can enhance performance and foster competition (Richter et al., 2015). Purpose-driven action emphasizes long-term, big-picture goals (Steger et al., 2013), but its lack of immediate rewards often results in lower participation (Abdelazeem et al., 2022), despite its compounding effects on sustainability and policy change, which commonly motivate climate activists. Youth climate activists applying the YCACO Framework must carefully balance reward- and purpose-driven approaches, weighing participation versus productivity trade-offs, while also addressing authority-related challenges in activism to maximize impact (O'Brien et al., 2018).

Three: Ascertaining the Optimal Outreach Model. Leviton and Schuh (1991) define outreach as establishing contact, maintaining motivation, and following up with target populations. Effective outreach is central to the YCACO Framework, with structured models such as the Grassroots Model and the Word-of-Mouth (WOM) Model providing systematic approaches to foster community relationships and collaborations. The Grassroots Model emphasizes bottom-up, community-led action through projects, mobilization, and inclusion, using practices such as meetings and coalition building to address local challenges and promote empowerment (Fressoli et al., 2014). Recent perspectives suggest that grassroots
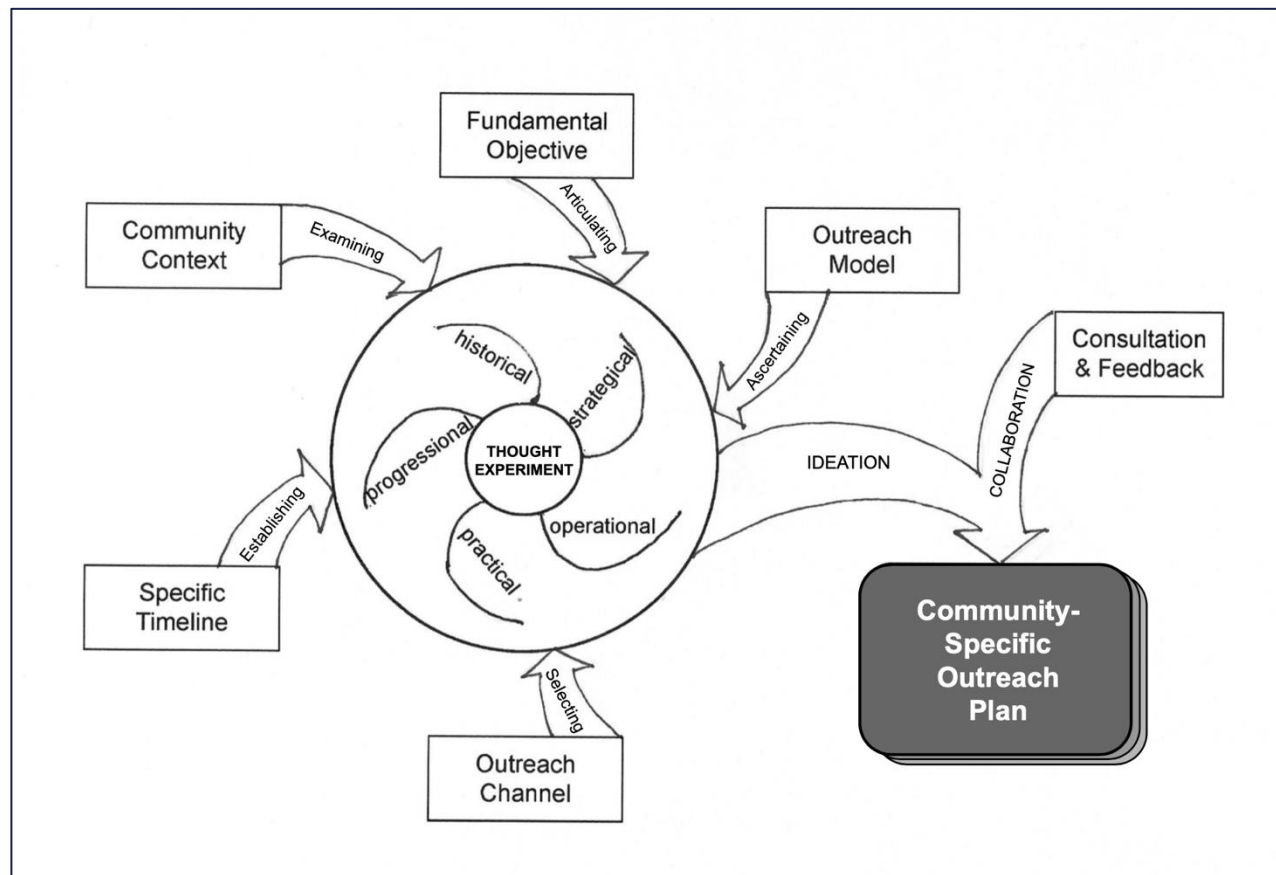
Figure 1: Youth Climate Action Community Outreach Framework

approaches can support sustainable social change rather than merely localized solutions (Ibrahim, 2017). The WOM Model relies on interpersonal communication through social media and face-to-face interactions to spread information and influence behavior (Lang & Hyde, 2013; Martin & Lueg, 2013). Face-to-face WOM has been shown to have stronger effects than online approaches, leveraging trust and credibility to build awareness and momentum (Martin & Lueg, 2013). Choosing between Grassroots and WOM models depends on context, including goals, target audience, and available resources. The Grassroots Model is suited for deep, community-driven change, while the WOM Model is effective for rapidly spreading awareness. Aligning this choice with community context and fundamental objectives, as outlined in the YCACO Framework, ensures strategic and effective outreach.

Four: Selecting Suitable Outreach Channels. Selecting

outreach channels is the third key element of the YCACO Framework, as it determines how activists connect with their communities and ensures accessibility and impact once the context, objectives, and outreach model are established (Capili & Anastasia, 2024). Outreach channels include social media, community meetings, workshops, newsletters, and local media, each offering distinct advantages and limitations (Feng et al., 2015; Tchuenche et al., 2021). Activists often use hybrid approaches to balance reach, engagement, and resource demands, carefully weighing trade-offs to optimize communication and action. The choice of channels depends on factors such as audience demographics, message type, resource availability, and desired interaction level (Aleti et al., 2025; Hornik & Yanovitzky, 2017). Social media is well-suited for younger audiences and broad campaigns, while workshops and meetings support detailed, interactive engagement, ensuring outreach aligns with community needs for maximum impact.

Five: Establishing a Specific Timeline. Developing a community-based climate action framework requires strategic use of cross-sectional and longitudinal methods, beginning with surveys or interviews to identify local concerns and knowledge gaps, as demonstrated by participatory climate research with children (Trott, 2019). Setting specific goals, such as reducing single-use plastic by 30% in a year, ensures initiatives are targeted and effective. Establishing a clear timeline with planning, implementation, and monitoring and evaluation phases is essential for structured progress and accountability. The planning phase defines objectives, identifies stakeholders, and prepares outreach, while the implementation phase focuses on community engagement activities, and the monitoring and evaluation phase collects feedback for improvement. Selection of timeline components depends on community needs: awareness-poor communities may require intensive planning, while more engaged communities may prioritize implementation, with monitoring and evaluation ensuring long-term adaptability and sustainability. Following this structured approach with stakeholder engagement, diverse outreach, and adaptive feedback ensures effective and lasting climate action initiatives.

Connectivity Among Key Elements

One: The Flow. The YCACO Framework uses five sequential elements to guide outreach, with the first element, "Examining the Community Context," being foundational. This step involves researching community characteristics, needs, and dynamics to ensure tailored outreach, making initiatives more relevant and effective (Abijuru & Mulyungi, 2018; Basler, 2005), while its absence risks presumptive and ineffective decisions (Ratcliff, 1979). Each element of the framework dynamically influences the others. "Examining the Community Context" provides insights that inform "Articulating the Fundamental Objectives" (Rossman, 2011; Siegel, 1987), while "Ascertaining the Optimal Outreach Mode" and "Selecting Suitable Outreach Channels" depend on community preferences (Hallett et al., 2007). "Establishing a Specific Timeline" integrates all prior elements, and failure to do so can result in misaligned goals, inefficient resource use, and poor engagement, reducing the framework's impact on youth-led climate activism.

Two: The Circling Effect. Marin-Garcia et al. (2008) stated that continuous improvement involves making ongoing changes to achieve more efficient and effective processes, a necessity in both business (Black, 1991 as cited by Singh & Singh, 2015) and climate activism due to shifting contexts. The YCACO Framework adopts a cyclical, non-linear approach in which users revisit and refine key elements to ensure flexibility, adaptability, and sustained momentum, as demonstrated by the need for adaptation during COVID-19 (Chanyasak et al., 2022; Donthu & Gustafsson, 2020; Rauchfleisch et al., 2023).

Framework Principles

Principle One: Creating a Community-Based Economy Through Climate Action

A community-based economy (CBE) emphasizes collective ownership, sustainability, and local self-sufficiency as alternatives to the unsustainable global economy (Münker, 2011; Otake, 2021; Matthies & Närhi, 2016; Karoblienė, 2024; Easterlin, 1974 as cited by Otake, 2021; Scholz, 2016 as cited by Vidal, 2022). By reducing dependence on external resources, CBEs reward collective input with shared outcomes, strengthening community bonds and participation (Mansuri & Rao, 2003; Peredo, 2014; Vidal, 2022; Schor & Fitzmaurice, 2015). Samsø, Denmark illustrates the success of a CBE, achieving renewable energy self-sufficiency, income generation, and carbon neutrality through community-owned wind energy (UNCC, 2023). Effective CBEs require strong values, broad community participation, and protection against corporate influence to ensure collective benefits and sustainable outcomes (Elsen, 2018).

Principle Two: Protecting Community Ownership Against Corporate Takeovers

Corporate takeovers, often occurring through mergers and acquisitions, prioritize shareholder profits and can erode local resources and equity, highlighting the need to safeguard community ownership (Eckbo, 2008; Gazzola et al., 2022). Preventing such takeovers supports the sustainable and equitable distribution of resources and fosters collective responsibility, as demonstrated by Nepal's community-managed forests (Shoked, 2010; Joshi, 2017). To resist takeovers, communities must invest in education and participatory decision-making, raising awareness of risks and emphasizing the benefits of local ownership (Altiok et al., 2023; Loha, 2018; Saaida, 2023). Maintaining transparency through regular audits further strengthens

accountability, prevents corruption, and protects assets from external exploitation.

Principle Three: Generating Global Connections to Boost Momentum

Generating global connections involves building partnerships among diverse groups, organizations, and communities to share knowledge, resources, and sustainability strategies (Solli & Mäkitalo, 2022; Berchin et al., 2019). Within the YCACO Framework, such collaborations advance the UN Sustainable Development Goals (Patel et al., 2022). These connections increase momentum by amplifying collective efforts, fostering innovation, and strengthening resilience (Leal et al., 2022). Despite challenges such as geographical and socioeconomic limitations, digital collaboration enables virtual knowledge exchange and inclusive participation. Global interconnections create feedback loops in which regional successes inspire broader progress (Lenton et al., 2022). Mobilizing youth is essential, with communities partnering with international organizations, participating in global forums, and forming advisory boards to enhance cooperation (Bowser et al., 2024). By promoting mutual learning, shared innovation, and cross-border dialogue, this principle transforms isolated initiatives into a coordinated global movement, accelerating collective progress toward sustainability.

Principle Four: Empowering Youth Leadership Across All Levels

Empowering youth leadership is central to the YCACO Framework, which promotes engagement by strengthening personal, interpersonal, and political power (Richards-Schuster et al., 2018). Every young person has unique leadership potential, which can be fostered through youth-led initiatives, collaborative planning, and self-directed roles. With nearly 30% of the global population under 30, youth are vital agents of change for sustainable development (Ekka et al., 2022; Han & Ahn, 2020). Despite declining civic participation, movements such as Fridays for Future demonstrate the impact of youth-led climate advocacy. The YCACO Framework develops leadership through co-decision-making, project facilitation, and peer mentorship, fostering self-confidence and commitment (Gambone & Connell, 2004). Adults shift from supervisors to mentors, supporting youth-led decision-making and implementing models such as peer

education (De Vreede et al., 2013). By partnering with institutions and organizations, this approach cultivates mentorship, shared responsibility, and inclusive leadership, ensuring sustainable, youth-driven community transformation.

Principle Five: Fostering an Ever-Evolving and Ever-Growing Community Mindset

Barriers to climate action often arise from psychological resistance rather than external control. Many individuals experience status quo bias, a preference for maintaining current conditions despite better alternatives (Samuelson & Zeckhauser, 1988). This resistance, rooted in the need for consistency and predictability, hinders progress toward sustainable practices. Younger generations face additional challenges in overcoming societal inertia and skepticism (Duchi et al., 2020). Adopting a growth mindset empowers communities to embrace change, innovation, and continuous improvement (Bos-de Vos et al., 2022; Orleans, 2010; Rissanen et al., 2024). Examples such as stagnating recycling programs highlight the need for adaptive strategies (Folz, 1999). Communities can nurture this mindset through education, celebrating change, and recognizing local environmental achievements (Mason & Weeden, 2022). Embracing a growth mindset fosters openness, collaboration, and proactive climate action (Dweck, 2006; Leiserowitz et al., 2009), transforming challenges into opportunities for sustainable progress.

THOUGHT EXPERIMENT CASE STUDIES (Appendix 1)

FRAMEWORK OPTIMIZATION

Case Study Summary

Success Observed Across All Cases

The YCACO Framework increased awareness of climate change by engaging communities in youth-led initiatives, helping participants better understand its causes, impacts, and their role in mitigation through both local and broader connections. YCACO enabled youth to overcome barriers to community engagement, fostering trust, shared responsibility, and sustained participation by aligning with community values and leveraging youth networks. Intrinsic youth motivation catalyzed continued awareness and momentum beyond individual events. The framework reduced disengagement and encouraged proactive action,

transforming youth responses from frustration to solution-focused initiatives (Burns et al., 2008). For example, in New Zealand, youth shifted from institutional disappointment to creating digital outreach campaigns, a trend observed across other case studies.

Challenges Across All Cases

A key challenge was public trust, as skepticism and hesitation toward youth-led initiatives limited participation. This often resulted from limited knowledge, negative past experiences, or reluctance to change (Kamneva, 2018; Fatima, 2025). Time was another major constraint, with academic, work, and extracurricular commitments limiting youth availability for planning and long-term execution of climate events, leading to smaller and short-lived projects. Case studies also revealed challenges in reducing reliance on carbon-intensive infrastructure such as transport, energy, and industry, as seen in Moldova's rail-based trade and The Bahamas' dependence on air travel for inter-island connectivity (Condratiuc, 2025). These systemic dependencies require costly, large-scale transitions that are difficult for many nations. While initial motivation was high, sustaining long-term participation proved challenging, with declines over time resulting in reduced momentum, unsustainable projects, and slower progress toward objectives.

Framework Limitations Realized

The YCACO Framework faced challenges from ageist norms, population dynamics, and economic reliance on polluting industries (Kamneva et al., 2018). More importantly, its linear design overlooked the nonlinear and evolving nature of activism and assumed a baseline of engagement and resources, limiting adaptability in under-resourced contexts. Population size affected outcomes: small communities struggled with limited reach (TSG, 2025), while large communities faced difficulty capturing diverse attention and building consensus (Hajnal et al., 2002). YCACO does not fully address these contrasting dynamics. Community dependence on environmentally harmful but economically vital activities, such as agrochemical-intensive agriculture in Moldova and Nepal, created tension between climate goals and local livelihoods. The framework lacks strategies to reconcile these socio-economic trade-offs, risking the alienation of communities. Scaling youth initiatives into government policy posed additional challenges, as national contexts vary and actions could disrupt businesses or

economies. For example, restrictions on shipping or trade could harm local commerce, highlighting the need for careful balance when integrating YCACO into policymaking.

Framework Optimization Themes

Need for Element to Break Barriers of Authority

As shown by the case studies, the current YCACO Framework does not adequately address barriers related to authority, which limits youth influence and undermines environmental objectives. The diminishing of youth voices reduces their ability to drive meaningful action. Resistance and rejection from authority figures, as observed in the case studies, decrease the likelihood of youth-led initiatives achieving their goals. The YCACO Framework must address this by fostering partnerships that enhance youth authority. By doing so, the framework can reduce authority-related barriers for global youth, strengthening its effectiveness and increasing the success of youth-led climate action.

Continued Mobilization and Sustainability

Rigidity in the framework elements is identified as the primary area for optimization, making continued mobilization of the elements essential for the sustainability of the framework. Mobility is understood as the capacity of social, economic, and institutional systems to remain responsive to changing conditions. Sustainability, in this context, refers to the endurance of both actions and institutions through interactive practices of reflection, resource efficiency, and inclusivity. Cross-case study analysis shows that mobility cannot be reduced to a single outreach model, as local constraints require context-specific adaptation. This highlights the need for a flexible framework that responds to feedback loops and adjusts objectives as conditions evolve. By treating mobility and sustainability as ongoing processes of adaptation rather than fixed outcomes, the framework avoids rigid design that may fail under disruption, thereby enhancing its potential for sustained youth-led climate action.

Optimizing the YCACO Framework

New Element: Consulting Trusted and Established Experts for Feedback

A key addition to the YCACO Framework is the

integration of consulting trusted and established experts (Nissen & Seifert, 2015). This element strengthens youth-led climate initiatives by providing access to reliable knowledge, practical guidance, and constructive critique. Many youth activists face challenges such as limited experience, uncertainty in decision-making, and difficulty gaining community trust (Shah & Khan, 2023). By including expert consultation, the framework helps address these challenges, ensuring that climate action plans are more accurate, effective, and credible in the eyes of the public and local stakeholders (Zerfass & Franke, 2013).

This element consists of three main components, each addressing a different type of support that experts can provide. First, experts can share knowledge, such as scientific facts or proven methods, helping young people develop accurate plans (Ertmer et al., 2008). Second, they can offer practical advice based on real-world experience, helping to avoid mistakes and adapt plans to actual conditions (Le Goues et al., 2018). Third, they can provide feedback, identifying areas for improvement before actions are implemented (Nentidis, 2024). Each component serves a distinct purpose: knowledge ensures accuracy, advice ensures feasibility, and feedback strengthens credibility and effectiveness.

Selecting which experts to consult is critical and depends on the specific needs of the project. For technical challenges, expert knowledge may be most important (Ertmer et al., 2008). For community engagement, practical advice and credibility are more relevant (Zhang et al., 2017). The key is to apply the components that best fit the situation. This approach allows youth to use expert input flexibly, enhancing project effectiveness without adding unnecessary steps.

Framework Envisionment with New Concept Addition

By fostering connections with subject matter experts, the revised framework addresses authoritarian barriers that previously limited youth influence, where age-based bias diminished their voices. A lack of recognized authority or community trust often prevents youth from leading meaningful climate action initiatives and achieving environmental objectives. The integration of these new elements equips youth with credibility and community validation, reducing barriers to success and strengthening key relationships with community members.

Framework Principle Optimization – Continuous and

Sustained Community Action

When optimizing the YCACO Framework, the researchers added arrows to clarify and support the new flow of the framework. These arrows make the cyclical nature of the framework and the intended continuous community outreach more obvious to readers and users. They emphasize the importance of each element and the recommended order for completing them. Without the arrows, users might struggle to understand how to use the framework, where to start, and how the cycle repeats. The arrows enhance comprehension, ensure appropriate pacing, and maintain a consistent sequence of operations. Because the framework is highly standardized, following the order of elements is important, making the arrows a necessary addition. They also accommodate users who begin at different stages; for example, if background research is already completed in a community context, users can start with the next element. While the framework remains usable without arrows, their inclusion is essential for interpretation, as an image alone cannot fully convey the cyclical structure, making it harder for youth to understand and apply effectively.

CONCLUSION

The Gap in YCA Research

The YCACO Framework addresses gaps in youth climate activist research, where systemic barriers such as age-based exclusion and limited resources restrict engagement, by providing a structured tool for youth to pursue environmental goals. It adopts a youth-centered approach, unlike most frameworks focused on adults, empowering young activists to achieve meaningful outcomes within their communities. Developed with contributions from youth across five diverse countries (Bahamas, Moldova, Nepal, New Zealand, USA), the framework is globally informed, adaptable, and broadly applicable. Being youth-authored and youth-led, YCACO not only contributes to scholarship but also represents youth agency, ensuring both authenticity and relevance.

Significance of the YCACO Framework

Youth climate activism has been underexplored compared to business and higher education contexts, leaving young activists without guidance. The YCACO Framework addresses this gap by providing tools that

help youth overcome barriers. It advances global understanding of youth outreach by incorporating insights from five culturally distinct case studies (Bahamas, Moldova, Nepal, New Zealand, USA), making it adaptable to diverse contexts and globally relevant. This study emphasizes the value of thought experiments as valid methods for framework testing when grounded in literature and contextual knowledge, producing reliable optimization results despite their counterfactual nature (Irvine, 1991). Being youth-led and youth-authored, the framework reflects the lived experiences of young activists, enhancing its relatability and applicability compared to adult-authored models. With SDG 13 (UN, 2024) lagging due to insufficient community engagement, the YCACO Framework helps youth overcome barriers, amplify their voices, and promote climate action to get back on track by 2030. The framework reduces age-based pushback, enabling youth to connect with communities and shift perspectives toward recognizing their impact in climate action. It also addresses a literature gap by providing a practical, implementable guide for youth climate activists worldwide to initiate meaningful and sustainable action.

Limitations of the YCACO Framework

The framework may not fully reflect the diverse experiences of youth shaped by local contexts (Broad et al., 2017; Welzel & Moreno, 2014) and requires adaptation to remain inclusive. Its simplified structure may overlook intersections between climate action and politics, education, and social justice (Fisher, 2012). Existing literature, dominated by higher-income and English-speaking contexts, limits representation of underdocumented regions (Sala et al., 2021; Shin, 2000). Thought experiments risk researcher bias and may not capture real-world complexity (Dietrich & Haider, 2014; Kornberger & Mantere, 2020), while cross-national comparisons remain influenced by researcher perspectives. Limited resources prevented large-scale fieldwork, so the framework needs further empirical validation.

Implementation challenges include differing knowledge levels, limited engagement due to climate change's perceived distance from daily life, age-based exclusions, and legal or cultural constraints, all requiring localized adaptation. Scaling outreach depends on collaboration, partnerships, and creative use of technology, while ongoing evaluation ensures effectiveness and equity.

The YCACO Framework requires empirical testing using mixed methods to combine quantitative measures with qualitative youth perspectives. Global application across diverse contexts will refine the framework into a universally supportive model, and future research could expand testing across disciplines, age groups, and demographics to strengthen adaptability and address limitations.

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