

Visualizing Change Pathways: Using Theory of Change to Scaffold Collaborative Inquiry in Action Research

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This study explores the integration of a Theory of Change (ToC) approach into Action Research (AR) to support systematic and collaborative organizational development. Based on a three-year project in Danish vocational education, the study draws on 15 workshops and rich qualitative data to examine how ToC helps participants articulate challenges, clarify activities, and visualize desired outcomes. While participants valued ToC's capacity to foster reflection, structure dialogue, and make assumptions explicit, they also encountered tensions around prioritization, timing, and the perceived linearity of change. The analysis identifies two key conceptual tensions: (1) between locally developed and generalizing understandings of theory, and (2) between emergent and linear models of change. Framed through pragmatism, these tensions are treated as resources for inquiry rather than obstacles. The study outlines conditions for meaningful integration, showing how ToC can function as a living visualization that enhances AR's methodological scaffolding while supporting transparent, context-sensitive, and collectively owned change processes.

Keywords: theory of change, action research, systematic approaches, collaboration, methodological exploration

Introduction

This study investigates the potential of integrating the Theory of Change (ToC) approach as a structured action-planning tool within the iterative cycles of Action Research (AR). Within AR, systematic inquiry and collaborative engagement are foundational principles that support organizational development (Lewin, 1946; Shani & Coghlan, 2021). These

principles require methodological competencies that are both procedural and iterative, reflecting the AR's emphasis on contextualization and ongoing inquiry. Researchers engaging in AR are guided by rich literature, which stresses that change processes should remain inclusive, iterative, and contextually grounded. The literature offers comprehensive methodological resources—such as the six stages of Search Conferences (Greenwood & Levin, 2007), Force Field Analysis (Coghlan & Brydon-Miller, 2014; Swanson & Creed 2014), and structured collaboration within professional learning communities (Johannesson, 2020; Lynch et al., 2025) to scaffold the cyclical rhythm of AR.

While AR offers a rich repertoire of methods for collaborative inquiry, its defining characteristic of methodological flexibility (Reason & Bradbury, 2006) poses both opportunities and challenges. As White et al. (2004) argue, this flexibility empowers researchers to adopt context-sensitive methods, provided they uphold principles of systematic and collaborative exploration. However, such methodological openness can also raise concerns about coherence, particularly about articulating values and structuring action. When these elements remain vague or unstructured, AR risks being perceived as informal dialogue rather than disciplined inquiry (Chevalier, 2015).

To address this tension, the present study explores how the ToC approach might serve as a complementary tool that enhances AR's methodological scaffolding while preserving its contextual responsiveness. ToC centers on core elements of change initiatives, offering a framework for mapping relationships between real-life challenges, interventions, anticipated outcomes, and underlying mechanisms (Funnell & Rogers, 2011; Pawson & Tilley, 1997). By enabling action researchers to visualize the full trajectory of change—from problem identification to desired outcomes—ToC encourages articulation of assumptions and values that underpin local initiatives (Connelly & Seymour, 2015; Friedman, 2001; Kerr, 2024). This process can foster shared awareness and make underlying assumptions explicit, supporting an iterative development of interventions that are both emergent and strategically oriented.

Initially developed within the evaluation community, ToC provides a framework for organizational inquiry that aligns with the participatory ethos and situated learning traditions of AR (Friedman, 2001; Kerr, 2024). By integrating ToC as a didactic framework and visual artifact, we aim to support participants in designing interventions

grounded in both reflection and action. This aligns with our pragmatic stance—that AR is a participatory and democratic approach oriented toward generating practical knowledge that benefits people in real-world contexts (Reason & Bradbury, 2006). Knowledge in AR is viewed as living, emergent, and shaped by participants' situated experiences, guided by ethical judgment, and socially (re)constructed through collaborative exploration (Coghlan, 2016).

Like Kerr (2024), we recognize that AR can be challenging for newcomers, especially local actors, to navigate. ToC offers a helpful structuring entry point that supports participants in articulating and negotiating their own development initiatives. Arguably, ToC's most significant contribution to AR is its capability to help action researchers explicate and visualize their implicit theories about how their local change initiatives operate. Without such articulation, underlying theories remain implicit and unchallenged (Connelly & Seymour, 2015; Friedman, 2001; Kerr, 2024), weakening both the transparency and evaluability of change efforts.

The study is guided by the following research question:

What potentials and challenges do a Theory of Change approach offer to the systematic and collaborative exploration processes of Action Research?

The paper is structured as follows: First, we introduce the Theory of Change (ToC) approach and explore its conceptual alignment with Action Research (AR), highlighting shared principles and methodological complementarities. Second, we present the design of the AR project, detailing how ToC was applied in practice, the empirical foundation, and the analytic strategy. Then, the analysis is organized around key potentials and challenges of integrating ToC into AR, focusing on problem exploration, interrelations between challenges and outcomes, concretization, and collaborative reflection. Finally, in the concluding discussion, we examine two central tensions—(1) between locally developed and generalizing understandings of theory and (2) between emergent and linear models of change—and outline conditions for using ToC meaningfully within AR.

The Theory of Change Approach and Its Link to Action Research

When constructing a ToC, intervention designers make explicit assumptions linking actions to expected outcomes, identify underlying mechanisms of change, and situate interventions within context (Funnell & Rogers, 2011; Pawson & Tilley, 1997). This process provides a structured approach to uncover and articulate the reasoning behind interventions, ensuring that the logic connecting problems, strategies, and expected effects is both visible and critically examined. In the absence of such articulation, these underlying theories often remain tacit, unexamined, and resistant to collaborative challenge (Connelly & Seymour, 2015; Friedman, 2001; Kerr, 2024).

This concern is echoed in efforts to connect ToC evaluation approaches with participatory methodologies. Friedman (2001) argues that program theory evaluation (which involves the construction of ToCs) and AR “share the proposition that tacit ‘theories of action’ are embedded within program planning and practices” (p. 167). He notes that stakeholders are often unaware of these implicit logics and that collaborative inquiry allows them to “see problems as shared dilemmas, gaining insight into their own dilemmas and those of other stakeholders” (Friedman, 2001, p. 162).

Within AR, formal action plans guide change processes (Mertler, 2024), grounded in Lewin’s foundational cycle of “planning, action, and fact-finding” (Lewin, 1946, p. 38). ToC complements this structure by offering an explicit framework for collaborative inquiry—one that invites participants to reflect, problematize, and test embedded assumptions (Coghlan & Shani, 2008). Kerr’s (2024) study highlights this potential, showing how individual teachers applying ToC to classroom-based interventions gained clarity and confidence in designing and monitoring change efforts. Inspired by this, the current study explores the broader application of ToC among leaders, teachers, and other professionals to design organization-wide change initiatives collaboratively.

Typically presented as a visualized model, ToC includes (1) a description of the current challenge the initiative seeks to address, (2) the planned activities, (3) their expected outcomes, (4) the underlying mechanisms linking activities to outcomes, and (5) relevant contextual factors. Figure 1 illustrates a ToC model with its key components.



Figure 1: Model of ToC, Credit: Christiansen, 2023.

This planning and evaluation approach is rooted in *theory-based* and *realistic* traditions (Chen, 2013; Coryn et al., 2011; Pawson & Tilley, 1997, Funnell & Rogers, 2011). Its strength lies in two interwoven aspects:

Theory-based foundations involve constructing a logically coherent argument—a locally grounded explanation of how and why an initiative is expected to generate change (Savaya & Waysmans, 2008). This reasoning is anchored in a combination of existing research and practitioner experience (Pawson & Tilley, 1997). Together, these elements provide a framework for making assumptions explicit, linking intervention logic to both context-specific insight and broader knowledge. This dual orientation aligns with AR's commitment to creating educational knowledge rooted in practice (Reason & Bradbury, 2006) and supports ethical and value-informed decision-making (Coghlan, 2016).

The realist orientation of ToC emphasizes contextual variability and complexity. Drawing on critical realist science theory (Bhaskar, 1975; Fletcher, 2017), ToC asks: “What works, for whom, under what circumstances, and why?” (Pawson & Tilley, 1997). This question highlights that intervention success depends on the interaction between intended mechanisms and surrounding conditions.

A complementary approach used in AR is Force Field Analysis (FFA), which maps driving and restraining forces acting on a change initiative (Coghlan & Brydon-Miller, 2014; Swanson & Creed 2014). Originating from Lewin's systems theory, FFA conceptualizes change as dynamic equilibrium, identifying factors that support or inhibit movement toward desired outcomes. While FFA visualizes environmental pressures, ToC

differs by offering a formalized structure for articulating and testing causal assumptions, linking challenges, activities, mechanisms, and effects in ways that remain evaluable and adaptable.

This emphasis on contextual dependencies and situated knowing aligns closely with AR's pragmatic foundation. Rather than seeking universal solutions, AR emphasizes the ongoing evaluation of what works within specific settings (Greenwood & Levin, 2007). Integrating ToC into AR processes can therefore strengthen participants' ability to critically assess intervention outcomes and enhance collective reasoning and judgment.

Applying ToC in AR Practice: Design, Empirical Basis, and Analysis

The study presents the results of an action research project within Danish vocational education aimed at increasing student completion rates. Over three years (2023–2025), we facilitated 15 workshops at five VET schools and three cross-school sessions, engaging project teams, teachers, leaders, and researchers. Each case school received a large ToC poster outlining key elements: present challenges, activities, mechanisms, effects, and contextual factors. Using empirical insight from local obser-views (Rohwedder et al., 2025), participants developed initial ToC's by placing Post-its on the poster (see picture 1). To align with Pawson and Tilley's (1997) concept of context–mechanism–outcomes chains, participants reflected on:

- a. The present challenge the initiative was designed to address
- b. The anticipated effects, describing how the problematic situation should change
- c. The mechanisms of change, outlining the assumptions behind how activities were expected to create impact
- d. Contextual factors influencing these mechanisms, shaping how activities function

In subsequent workshops, researchers introduced new obser-view findings, facilitating discussions that led to ongoing refinement of the ToC and its poster elements.



Figure 2: Working with ToC in Local Workshops

Empirical Basis

The workshops generated qualitative empirical data on the potentials and challenges of using a ToC approach in AR. The analysis in this study is based on the following:

- Field notes: Observations documented during the workshops
- Participants' written reflections: Collected after the first round of local workshops through the following questions:
 - "Complete the sentence: The ToC as an approach to develop our local initiative has..."
 - "What has worked well when applying the ToC approach?"
 - "What has been difficult in working with the ToC approach?"
- Audio recordings: Capturing facilitated discussions on the ToC approach during the second round of local workshops.

Data Analysis

The analysis was conducted in two iterative phases:

1. The first author conducted an inductive coding of the written reflections and transcriptions of facilitated discussions using NVivo. Since the analysis was inductive, it was not guided by a predefined conceptual framework, allowing themes to emerge directly from the data. This approach was chosen to capture participants' authentic reflections on the ToC process without imposing external categories.

2. The first and second authors collaboratively analyzed the coded data to identify recurring features that participants highlighted as potentials and challenges of the ToC approach. To ensure intercoder reliability, the first and second authors compared their coding results, discussing discrepancies until consensus was reached. Through this process, four inductive themes emerged:

- a. Problem exploration
- b. Interrelations between challenges, activities, and effects
- c. Concretization
- d. Structuring and facilitating collaborative reflection

Additionally, reflection on the participants' responses to the ToC approach led to the identification of two additional themes:

- e. ToC as either a locally, collaboratively constructed model or a generalizing model
- f. Planning change as either a linear, unambiguous process or a collaborative, emerging effort

While participants reflected on the ToC process, they did not participate in data condensation. Their insights informed the thematic development but were analyzed separately by the researchers. Excerpts from written reflections and field notes illustrate the analytical themes that follow the analysis.

Empirical Analysis of Potentials and Challenges in Integrating a ToC Approach

The analysis is presented in two main parts. The first section explores the potentials and challenges of the ToC approach in relation to systematic exploration. The second examines the potentials and challenges of the ToC approach in relation to collaborative exploration. While these aspects are interconnected, they are analytically separated to provide a clearer understanding of the potentials and challenges of the ToC approach within the context of action research.

Potentials and Challenges Related to Systematic Exploration

Overall, the participants found the ToC approach to be a meaningful framework for development work, offering a comprehensive overview of the initiatives. While many described the approach as both exciting and inspiring, they also found it challenging. The following sections explore the nuances of these experiences, focusing on problem exploration, the interrelations between problems, activities, and desired effects, and finally, the process of concretization.

Problem Exploration

Written reflections after local workshops reveal that participants perceived the ToC approach as a meaningful support for exploring local challenges. One participant noted: “The ToC as an approach to develop our local initiative has made us as teachers—but also as an organization—aware of the challenges we face daily.” Similar reflections emphasized that the approach “helped us to articulate challenges” and “contributed to becoming more aware of specific challenges in teaching through conversations with other participants.” These insights suggest that the ToC approach provided a structured basis for reflecting on challenges within the local context, sharpening participants’ focus on problem exploration. This process was grounded in inputs generated through research methods, ensuring that reflections were informed, systematic, and contextually relevant.

However, a significant challenge in problem exploration lies in the complexity of challenges themselves. Reflections suggest that working with the ToC uncovered a multitude of overlapping challenges, making it difficult to prioritize which issues to address during the development phase:

“To limit oneself...One challenge sheds light on another.”

“One challenge is connected to another. Difficult to separate challenges.”

“We get a lot on the table. It requires subsequent prioritization.”

The challenge of prioritization underlines the relevance of AR’s insistence on complexity and integration of problems as central to collaborative reflection. The statements indicate that deciding which specific challenge to move forward with is not resolved by using the ToC approach.

In line with AR's emphasis on collaborative reflection on complex, interrelated problems, participants were given extensive time to articulate and discuss existing challenges during the initial local workshops. However, comments suggest that even with this structured process, prioritization remained difficult—not because it was missing from the AR design but because of the nature of the challenges that resisted simplification. As one participant put it: “More understanding/knowledge about why we chose as we did. More about the problem we want to improve, ‘solve.’” This indicates that while prioritization is a central principle of AR, it is not always straightforward in practice. The ToC approach helped surface the complexity and interconnectedness of local challenges, but it did not resolve the tension of deciding which issues to address first. Instead, it highlighted the need for deeper analysis, reinforcing AR's commitment to context-sensitive inquiry and collaborative decision-making.

Although AR emphasizes thorough problem exploration prior to selection, some case school managers had predetermined the problem and frame for action plans, thereby limiting the participants' opportunities for exploration and prioritization: “That the initiatives were chosen in advance—someone had decided them beforehand.” In this regard, participants highlighted the importance of introducing the ToC approach early in the process. “Retrospectively, we should have worked with a ToC before deciding on which project activities we would work with.” These reflections indicate that, in some instances, the ToC process revealed that the interventions had been decided too quickly. Several case schools, for example, had already chosen to center their project on co-teaching, contradicting the initial problem exploration phases required within AR practice. The empirical evidence illuminates that organizational actors sometimes struggle to uphold the AR principle of open, collaborative problem exploration and activity planning, as managers and project groups may have predefined interests. The statements likewise suggest that integrating a ToC approach early in the clarification phase is crucial for ensuring that chosen initiatives are well-grounded in a shared understanding of local challenges.

Interrelations Between Problems, Activities, and Effects

Participants consistently emphasized that the ToC approach helped them reflect on the interrelations between key elements of the change process:

“[It] forced us to think about both challenges, specific activities, mechanisms/effects.”

“It has been good to think analytically about the challenge, activity, coherence, and effect.”

“[The approach] gave me a better overview of why we want to act and expanded my horizon for many other reasons, possibilities, and explanations.”

These reflections suggest that the analytical categorization of ToC is a significant strength. Participants experienced it as a framework that not only provided an ‘overview’ but also ‘forced’ them to consider how challenges, activities, mechanisms, and effects are connected. This aligns with the study’s conceptual framing of ToC as a tool that enables visualization of the full trajectory of change—from problem identification to desired outcomes—while articulating assumptions and values underpinning local initiatives.

In this light, the participants’ comments illustrate how ToC can serve not only as a planning tool, but a catalyst for deeper inquiry, helping participants to reflect, problematize, and refine their understanding of how change is expected to unfold. The ability to envision a coherent change pathway, while remaining open to complexity and revision, is a key contribution of ToC within AR practice.

The visualization component of the ToC process emerged as a key element in supporting participants’ analytic engagement. One participant noted: “[The ToC] visualizes the steps we need to go through to change the challenges we face and the complexity of solving it and making it sustainable.” This feedback underscores the value of visual mapping in clarifying the interrelations between challenges, activities, and desired effects. In contexts marked by complexity, such visualization helps participants grasp not only the logic of their interventions but also the layered nature of the problems they aim to address. During the first iteration of their local ToC, participants used the category ‘contextual factors’ as a catalyst for collaborative discussions on which problems were within their grasp to change, and which were considered external.

By placing and reordering Post-its, the participants transformed abstract intentions into a tangible sequence of actions, mapping the pathway to change and making it more comprehensible. Moreover, the ToC approach appeared to foster an iterative mindset. As one reflected: “[The ToC] made us sharper on which challenges we have and also made us aware that we need to reconsider our activities.” This insight highlights ToC’s capacity to create spaces to revisit, debate, and revise action plans. In this way, ToC does more than structure initial planning; it cultivates a reflective practice that is responsive to complexity. This iterative and visual nature of ToC supports the development of interventions that are coherent, sustainable, and context sensitive.

The Process of Concretization

Participants highlighted that the ToC approach significantly aids in concretizing activities and desired effects, contributing to the internal coherence of change initiatives. They described the approach as beneficial for:

“Concretizing and structuring our thoughts regarding project efforts.”

“Create clarity and keep us focused on the practical steps we want to implement towards a measurable effect.”

“Sharpen the focus on effect/impact and what we think in real activities can be measured.”

These reflections underline the value participants placed on the approach’s ability to foster discussions that help concretize activities and clarify both the practical steps to be taken and the intended effects, as well as how to measure those effects. However, participants also stated that it remained a difficult part of the ToC process:

“To get the thoughts down on paper.”

“To concretize all our ideas, problems, etc.”

These comments reflect the difficulty of articulating and detailing what should be done within the organization, even as participants acknowledge the approach’s strength in fostering such discussions. An interesting paradox emerges in one participant’s reflection:

“It is difficult to speak a common language when we are on the verge of initiating our actions.”

The statement captures a core challenge in early-stage AR processes, namely, the difficulty of articulating a shared ToC before any concrete experiences have taken shape. When actions are still imagined rather than enacted, participants may lack reference points to anchor their discussions. As a result, the process can feel abstract and fluffy, making it hard to establish a common language.

Potentials and Challenges Related to Collaborative Exploration

This next analytical section explores the ToC through the lens of collaborative exploration, highlighting its potentials and challenges. The first part examines how collaborative is structured and facilitated. The second addresses whether ToC is understood as either a locally and collaboratively constructed model or a more generalizing framework. The final part considers how change plans are perceived—whether as linear and clearly defined or as emerging and shaped through collaboration.

Structuring and Facilitating Collaborative Reflection

Participants emphasized the ToC approach as a valuable framework for enabling meaningful dialogue and joint reflection. Several noted its capacity to create space for shared inquiry:

“Time to discuss challenges, to listen to others’ considerations and thoughts.”

“Space for joint discussions/perspectives’ differences.”

“Always good to discuss topics and thoughts in plenary because you become wiser from it.”

“A good way to have good conversations on the way to finding the goal we should work towards based on our challenges.”

These reflections highlight the potential of ToC to scaffold what participants repeatedly described as “good conversations,” structured opportunities to listen, engage with perspectives, and collectively deepen understanding. The visual overview of the change

pathway provided by the large ToC poster, along with the collective process of placing and reorganizing Post-its, supported these conversations.

Other reflections, while less explicitly focused on collaboration, underscore the reflective potential:

“It has opened up many thoughts about the process.”

“The process forces us to reflect and become concrete regarding activities.”

“The many inputs the work has ‘opened up.’”

These statements suggest that the ToC approach compels participants to engage in structured reflection, helps participants to clarify their thinking, and moves the group from abstract intention to concrete, shared action. In this way, ToC is perceived as a valuable tool for organizing and facilitating collaborative discussions.

ToC as Locally, Collaboratively Constructed or Generalizing Model

A recurrent theme in collaborative exploration was that participants are on a continuum between understanding ToC as locally situated or a model for generalization.

Some participants expressed a preference for researcher-driven theorizing, particularly emphasizing effect measurement. This perspective reflected a desire to shape the ToC into a generalizing model—one that could offer insights beyond the immediate context and inform wider practice.

Conversely, other participants embraced ToC as a locally situated and collaboratively constructed framework. One participant reflected: “[It] increased my understanding that it is a local thinking that arises from our practice and that it is our ToC within an overarching umbrella.” This perspective positions ToC as a dynamic product of collaborative efforts, grounded in participants’ explicit ideas and contextualized planning.

The model’s flexibility to accommodate both perspectives can be considered a strength. However, from an AR perspective, it becomes problematic if participants undervalue local exploration, organization, and adaptation. A generalizing model that lacks contextual grounding and negotiation may hinder meaningful enactment as it becomes disconnected from the practices it aims to change.

The potential disconnect from local actions was illustrated by a comment made during a process where participants were invited to share individual perspectives on potentially effective activities. One participant remarked, “But then you [researchers] can’t use it for anything” (field note, local workshop). This statement reflects the concern that when a ToC captures diverse, locally situated perspectives, it may lose utility for researchers seeking to make general claims about the initiative’s effectiveness. For participants expressing this critique, the value of ToC lies in its capacity to support broader evaluations and effect assessments, prioritizing generalizability over the nuanced complexity of context-specific formulations.

While both perspectives offer distinct contributions, this tension highlights the need to balance ToC’s dual roles: as a generalizing model that informs wider understanding and as a locally situated framework that supports meaningful enactment within specific contexts.

Change Plans as Emerging or Linear

A final theme in the use of ToC as a tool for collaborative exploration in AR concerns the participants’ underlying conceptualization of ‘change.’ Whether ToC is perceived as supportive of organizational development is closely tied to how the participants interpret the linearity of the model. The following comment from a participant exemplifies this:

“We [members of the working group] have talked a bit about how the ToC in its form seems very linear and fixed (...). It seems like a very positivist thinking about cause and effect (...). It is not at all how we normally think about our work, where we usually work much more circularly.” (*Field note, local workshop*)

This statement points to a perceived epistemological tension. The participant interprets ToC as grounded in a positivist logic, where the cause-and-effect relationships are deterministic and fixed. This contrasts with the group’s own exploratory and iterative approach to change, which emphasizes continuous negotiation and adjustment through circular processes. For participants who value an emergent approach to change, the perceived linearity of ToC can feel misaligned with their practice. In contrast, other participants interpreted the linearity and stability of ToC as beneficial. At another school,

a participant resisted revisiting the local ToC in the light of new insights, arguing that the plan was already “completed.” She explained that she and a colleague had deliberately simplified and finalized the scope of the ToC based on prior group inputs before the workshop. This perspective reflects a belief that change can—and should—be stabilized once a coherent plan is established.

These contrasting interpretations suggest that when ToC is understood as a static model with fixed causal relationships, it may generate tensions during collaborative exploration. Both those who support linearity and those who favor emergent, iterative approaches may struggle when their conceptualization of change does not align with the structure or flexibility of the ToC process.

Concluding Discussion

This study set out to explore the question: *What potentials and challenges does a Theory of Change approach offer to the systematic and collaborative exploration processes of Action Research?* Drawing on a case study conducted within the Danish vocational education sector (Complementum, 2023–2025), we examined how ToC might function as a methodological tool within AR to support structured reflection, collaborative learning, and development of local change initiatives.

Our findings point to several potentials. When used in facilitated workshops, the visualized ToC framework helped participants focus their attention on problem exploration and the contextual relevance of their interventions. The majority of participants experienced ToC as a useful structuring device that clarified their change initiatives. For some, it also prompted productive thinking around outcomes and measurability. Working with ToC encouraged participants to collaboratively formulate and visualize their assumptions about the interrelations between challenges, activities, and intended effects.

At the same time, the study surfaced important challenges. Despite ToC’s intention to aid concretization, participants still found it difficult to articulate specific, shared theories of local change. The visual model did not remove this complexity; rather, it highlighted it. Moreover, the co-creative potential of ToC was constrained when interests were predefined.

In terms of collaborative processes, the study suggests that developing a ToC together can support AR's ambition of fostering mutual understanding and shared ownership. When explicitly framed as a locally developed model, the ToC seemed to strengthen engagement and helped anchor inquiry in real-world concerns. However, the analysis raised awareness of the potential issue that some participants did not value the local contextualization, thereby disconnecting the ToC from the lived reality of practice. Additionally, some participants problematized that the ToC appeared static and the change pathways overly linear. These dynamics reveal two key tensions at the heart of combining ToC with AR:

- I. Between *locally developed* and *generalizing* understandings of theory
- II. Between *emerging* and *linear* understandings of change

These tensions highlight not only friction points but also the reflective and adaptive capacity required in pragmatic action research (Reason & Bradbury, 2006; Greenwood & Levin, 2007). In the following, we discuss these tensions and the conditions necessary for their meaningful integration into AR processes.

I. Locally Developed vs. Generalizing Understandings of Theory

Within AR, theory is understood as practical knowing, sensitive to and co-constructed through lived experience and embedded in specific social contexts (Coghlan, 2016). Our analysis showed that many participants viewed the ToC's theory-building as an opportunity to articulate and refine *their own situated logic of change*, resonating with AR's epistemological stance that knowledge is socially constructed and emergent. In this framing, ToC served as a visual scaffold for making implicit reasoning more visible and discussable.

However, some participants experienced tension when they perceived the theory-building process as aligned with a generalizing, external framework, echoing traditions of best-practice models or impact-focused evaluation (Vedung, 2010; Patton, 2018). These contrasting orientations toward theory—local emergence vs. imported evidence—posed challenges to collaboration, especially when expectations about the purpose and status of ToC diverged.

This tension reflects what Stephen Toulmin (2001) referred to as a legacy of the “Cartesian wrong turn,” a philosophical split falsely dichotomizing general/universal knowledge as abstract and fixed and particular/contextual knowledge as concrete and messy. From Toulmin’s perspective, this dichotomy obstructs meaningful inquiry by privileging idealized certainty over practical context-sensitive reasoning.

Echoing Toulmin’s call for contextual reasonableness and consistent with a pragmatic worldview, we recognize that generalizing frameworks and locally developed insights need not be treated as oppositional. Rather, participants’ ambivalence reflects the difficulty—and importance—of negotiating knowledge claims that strive both for legitimacy and situated usefulness. We interpret this not as a theoretical antinomy, but as a *practical site of inquiry*—a space where action researchers and participants can co-construct theories that are meaningful in both local contexts and broader knowledge conversations.

Ultimately, drawing on pragmatism, we argue that such tensions are not obstacles to be resolved, but resources for generative reflection. Pragmatism treats theory as provisional and fallible, welcoming divergent perspectives as opportunities for deepening inquiry. In this light, tensions around the status of theory invite deliberative dialogue, encouraging participants to negotiate coherence between their own assumptions and broader frameworks. It can furthermore be argued from a pragmatic perspective that the very distinction between generalizations versus particulars is problematic. Pragmatists would argue that the two are different renderings of the same process for different audiences and purposes.

II. Emerging vs. Linear Understandings of Change

The study further reveals how integrating ToC into an AR process can surface tensions between two distinct understandings of change: emerging and linear. These differing orientations shape how participants approached the development of their local ToCs.

Some participants embraced the flexibility of iteratively adjusting their ToC based on experiences and observations made during implementation. This adaptive approach reflected AR’s commitment to inquiry as living, situated, and responsive (Reason & Bradbury, 2006), valuing complexity and ongoing problem exploration. Others, however, leaned toward a more linear and stabilizing view—seeing value in defining the change

pathway in advance to create direction and reduce ambiguity. To them, coherence and predictability were essential, especially within institutional environments that prioritize planning and accountability.

These tensions mirror a deeper historical pattern identified by Robert Nisbet (1969) where linear theories of change, promising definitive progress, have long dominated Western thought. This legacy not only informs policy and evaluation practices but also subtly shapes what participants expect of frameworks like ToC. The assumption that change should be predictable, forward-moving, and controllable clashes with AR's view of change as inherently emergent, contingent, and shaped through reflective engagement.

Again, in line with the pragmatic encouragement to view tensions as opportunities for generative dialogue, linear and emergent models of change do not need to be mutually exclusive; the task is to navigate their interplay with attentiveness to context and purpose. In this light, the ToC can function as a "*living visualization*," offering enough structure to support clarity and shared direction while remaining open to revision as learning unfolds. Visualizations, defined as "physical representation designed to make an abstract concept visible" (Uttal & O'Doherty, 2008, p. 53), are valuable tools for thinking and learning and, thus, particularly relevant to the AR inquiry process.

To support this integration, action researchers must facilitate space for meta-reflection, allowing participants to surface and examine their underlying assumptions about how change happens. Without such facilitation, there is a risk that the ToC either becomes a static planning document or, conversely, collapses into vagueness. When used within AR, ToC can help address the need to balance stability and adaptability, supporting the transformation of informal, individualized action plans into collectively owned, transparent strategies (Mertler, 2024).

In short, the tension between emerging and linear understandings of change is not a flaw in combining AR and ToC; it is an invitation to practice pragmatism: to hold tensions as a driver of inquiry and to support participants in co-constructing meaningful, responsive, and actionable understandings of change.

Combining a ToC Approach and AR: Conditions and Conceptual Tensions

Combining the ToC approach within AR is not simply a matter of adding one method to another. It involves navigating a set of conceptual tensions and attending to specific

conditions that make the integration meaningful. AR already operates with embedded theories of change, emerging from practice, collaboratively developed, and continuously refined. Therefore, introducing ToC as an explicit and structured theorizing practice requires clarification: What does ToC add that is not already inherent in AR?

We argue that ToC, when reconceptualized within the collaborative and reflexive paradigm of AR, can function as a structured framework for surfacing, inquiring into, and potentially transforming the diverse and often implicit theories of change that participants bring with them. This is particularly valuable in contexts where participants hold contrasting assumptions about how and why change happens. Rather than imposing a singular causal logic, ToC can become a generative framework for collective reflection—provided certain conditions are met.

First, it is crucial to recognize that participants are not “blank slates.” They come equipped with their own theories, experiences, and interpretations of change. Making these visible and open to collaborative inquiry is central. Facilitators must create a space where these divergent theories of change can be articulated, questioned, and when appropriate, revised. This requires sensitivity to how “theory” is understood: making space for both practitioners who value generalizations and those who ascribe to locally situated action plans. Second, for ToC to contribute productively within an AR process, it must be embedded in a collaborative paradigm. Theorizing must be a shared activity, focused on exploring what works, for whom, and in which contexts. While traditional theory-based evaluation often assumes a more linear and externally driven logic, alternative strands within the evaluation literature, such as utilization-focused evaluation (Patton, 2022) or Fourth Generation Evaluation (Guba & Lincoln, 1989), foreground participant engagement and local relevance. Drawing on these traditions, ToC can be reoriented to support collaborative inquiry and decision-making, aligned with AR’s participatory ethos.

Third, combining ToC and AR calls for engaging with the tensions that arise from different understandings of change. Rather than viewing these tensions as obstacles, they can be treated as resources for learning. Facilitating meta-level discussions about change can help participants reflect on the assumptions they bring, the kinds of change they hope for, and the pathways they see as plausible or desirable. In doing so, the action researcher

takes on a dual role: holding space for flexibility and creativity, while also providing enough structure to keep the inquiry coherent and grounded.

These three conditions—surfacing participants' theories, embedding theorizing in a collaborative paradigm, and engaging tensions around change as sources of learning—do not guarantee success. However, they mark out a path for how ToC and AR can be meaningfully combined. Rather than resolving tensions, this integration treats them as constitutive of the work: it is in navigating these tensions that both learning and transformation become possible.

Our empirical study illustrates these dynamics in practice. The core challenge for the action researcher lies in navigating the tension between emergence and systematization, avoiding both unpredictability and rigid structure (Chevalier et al., 2015; Reason & Bradbury, 2006). Used as a *living visualization*, ToC can support this navigation. We found that ToC helped visualize and concretize local values and assumptions that might otherwise remain implicit. This visualization can facilitate a shift from informal, individual action plans, flexible but often fragmented, toward shared, formalized action plans that are transparent, systematic, and collectively owned (Mertler, 2024).

At the same time, our study highlights how difficult it can be to articulate a shared local ToC. This challenge is not unique to ToC but reflects a broader difficulty in collaborative processes: aligning diverse perspectives while keeping inquiry open and generative. The ToC framework makes this challenge more visible and, thus, more available for collective work.

Ultimately, a key ambition for AR is to build organizational capacity for ongoing inquiry and development beyond the lifespan of the research project. Achieving this requires more than methodological tools; it calls for learning processes that enable participants to work both systematically and collaboratively. In this context, visualizations, structured reflection tools, and skilled facilitation are not just supports; they are integral to cultivating a reflective organizational culture. When used in this way, ToC can support AR not by narrowing its scope, but by making its learning processes more transparent, accessible, and sustainable.

References

Bhaskar, R. (1975). *A Realist Theory of Science*. Leeds Books.

Chen, H. T. (2013). Theory-Driven Evaluation. In S. Mathison (Ed.), *Encyclopedia of Evaluation*. Sage Publications.

Chevalier, J., Buckles, D., & Bourassa, M. (2015). The skillful means of engaged research. In *The SAGE Handbook of Action Research* (3rd ed., pp. 608–618). SAGE Publications.

Christiansen, N. L. S. (2023). *Exploring intraorganizational translation: A Danish case study of managerial implementation of data use in schools*. Aalborg Universitetsforlag.

Coghlan, D. (2016). Practical knowing: The philosophy and methodology of action learning research. In Pedler, M. (Ed.) *Action learning in practice* (pp. 357–367). Routledge.

Coghlan, D., & Brydon-Miller, M. (Eds.). (2014). *The SAGE encyclopedia of action research*. SAGE Publications.

Coghlan, D. & Shani, A. B. (2008). Insider action research: The dynamics of developing new capabilities. In Reason, P. & Bradbury, H. (Eds.) *The SAGE Handbook of action research*, 643–655. SAGE Publications.

Connelly, M., & Seymour, E. (2015). *Why Theories of Change Matter*. WCER Working Paper 2 July.

Coryn, C. L. S., Noakes, L. A., Westine, C. D., & Schröter, D. C. (2011). A systematic review of theory-driven evaluation practice from 1990 to 2009. *American Journal of Evaluation*, 32(2), 199–226.

Greenwood, D. J., & Levin, M. (2007). *Introduction to action research: Social research for social change* (2nd ed.). SAGE publications.

Fletcher, A. J. (2017). Applying critical realism in qualitative research: methodology meets method. *International Journal of Social Research Methodology*, 20(2), 181–194.

Funnel, S. (2000). Developing and using a program theory matrix for program evaluation and performance monitoring. *New Directions in Evaluation*, 87, 91–102.

Funnel, S. C., & Rogers, P. J. (2011). *Purposeful Program Theory*. Jossey-Bass.

Guba, E. G., & Lincoln, Y. S. (1989). *Fourth generation evaluation*. Sage.

Kerr, K. (2024). Using a theory of change approach to support teachers' action research inquiries. *Educational Action Research*, 33(3), 491–507. DOI: 10.1080/09650792.2024.2312173

Johannesson, P. (2020). Development of professional learning communities through action research: understanding professional learning in practice. *Educational Action Research*, 30(3), 411–426.

Lewin, K. (1946). Action Research and Minority Problems. *Journal of Social Issues*, 2, s.34–46.

Lynch, D., Vo, H., Yeigh, T., Marcoionni, T., Madden, J. (2025). Action research communities as a whole-of-school teaching improvement initiative: a multi-method multi-informant study. *Australian Educational Researcher*, 52, 1133–1162.

Mertler, C. A. (2024). *Action research: Improving schools and empowering educators*. Sage Publications.

Nisbet, R. A. (1969). *Social change and history: Aspects of the western theory of development* (Vol. 240). Oxford University Press.

Patton, M. Q. (2018). *Principles-focused evaluation: The Guide*. Guilford Press.

Patton, M. Q. (2022). *Essentials of Utilization-focused evaluation* (5th ed.). Sage Publication.

Pawson, R. & Tilley, N. (1997). *Realist evaluation*. Sage Publication.

Reason, P. & Bradbury, H. (2006). Introduction. In Reason, P. & Bradbury, H. (Eds.). *Handbook of action research: Concise paperback edition*. Sage Publications.

Rohwedder, A-B. N., Møller, B., Christiansen, N. L. S., & Larsen, A. O. (2025). Observview som dataproducerende metode i aktionsforskning. *Qualitative Studies* 10(2).

Savaya, R. & Waysman, M. (2008). The Logic Model - A Tool for Incorporating Theory in Development and Evaluation of Programs. *Administration in Social Work* 29(2).

Shani, A. B., & Coghlan, D. (2021). Action research in business and management: A reflective review. *Action Research*, 19(3), 518–541.

Swanson, D. J., & Creed, A. S. (2014). Sharpening the Focus of Force Field Analysis. *Journal of Change Management*, 14(1), 28–47.

Toulmin, S. (2001). *Return to Reason*. Harvard University Press.

Vedung, E. (2010). Four Waves of Evaluation. *Evaluation*, 16(3), 263–277.

Uttal, D. H., & O'Doherty, K. (2008). Comprehending and Learning from "Visualizations": A Developmental Perspective. In J. K. Gilbert, M. Reiner, & M. Nekhleh (Eds.). *Visualization: Theory and practice in science education*. Springer.

White, G. W., Suchowierska, M., & Campbell, M. (2004). Developing and systematically implementing Participatory Action Research: Community Integration of People with Traumatic Brain Injury. *Archives of Physical Medicine and Rehabilitation*, 85(4), 3–12.

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