

Article

Exploring Group Solidarity for Insights into Qualities of T-learning

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Abstract: Across the world, organised groups of farmers participating in just and sustainability transformations encounter multiple obstacles. Through solidarity manifested in iterative processes of questioning, co-learning, collective action and reflection, and value creation for themselves and for others, some succeed in overcoming them. This article investigates how a district organic farmer association in Zimbabwe is encountering and handling group solidarity challenges arising from shifting from local to district level coordinated organic production and marketing. Based on the use of change laboratory, this paper explores solidarity at the local niche and networked district level to seek insights into the qualities of T-learning.

Keywords: solidarity; change laboratory; T-learning; transformations; interpersonal sustainability competence

1. Introduction

1.1. Research Objectives and Their Background

In this article, we explore how a district organic farmer association in Zimbabwe, which was formed from seven relatively successful local organic farmer associations, is facing and handling solidarity challenges. The challenges have been undermining coordinated district level production, storage, and marketing of organic produce. More specifically, the article: (a) explores how solidarity within and between the local organic groups can strengthen farmer capacities to tackle their complex problems, (b) draw insights into solidarity competences that are needed in such settings, and (c) examines local and networked group solidarity or lack of it for qualities of transformative and transgressive (T)-learning in just and sustainability transformations. The study focuses on Hwedza Organic Producers Association (HOPA), one of the eight networked district organic farmer associations in Mashonaland East Province of Zimbabwe established in 2014 following an amalgamation of seven local organic farmer associations formed in 2011. HOPA's goal, which is identical to that of the other seven district organic associations, is to improve its members' responsible agricultural production practice, farming landscapes, food and nutrition security, marketing opportunities [1]. The district associations produce and market organic horticultural produce for marketing in nearby small towns and in the capital city of Harare. District associations in drier areas keep small livestock for marketing while those in relatively wetter areas invest more in crop production [1]. They are all interested in developing capacities to work with and influence their stakeholders. These include neighbouring farmers who do not practice organic agriculture, traditional leaders, input providers, consumers of their produce and policy makers.

HOPA practises organic and conservation agriculture as a form of sustainable agriculture that produces food, fibre and common goods such as soil and water conservation, biodiversity conservation

and carbon sinking [2]. This agricultural practice also seeks to achieve cognitive justice by breaking professional scientists' knowledge monopoly and encouraging practitioners to co-produce knowledge and innovation with fellow citizens and scientists [3]. It also seeks to enhance agriculture stakeholders' solidarity and inter-agency through equitable collaborations between farmers, researchers, policy makers and activists [3].

Historically, Zimbabwe farmers living in the same village and neighbourhood used to practise *nhimbe* or *umwe*. This involved the periodic solidarity between members of a farming community to jointly plough, weed, or harvest agricultural produce and to construct community infrastructure such as water collection sources [4,5]. The practice has been described as a holistic community-based development mechanism that taps into and develops drew on pooled human labour, draught power and social capital towards sustainable development, in a process that united the rich and the poor [6]. It was undermined as part of the colonization process and is re-emerging in the context of decolonisation. Agricultural cooperatives were formalized in 1909, primarily for economic gains, and this continued to be the focus during the post-independence period [7]. Against this background and the social and economic transformation interests of the post-independent government, Etkund [8] argues that cooperatives also served as part of a continued political and social struggle towards controlling the production process and transforming relations of production. However, only a small proportion of the agricultural cooperatives have flourished partly because they developed as enterprises isolated from the masses [8]. The failure of agricultural cooperatives in the past and their disconnect from the ordinary masses have persisted over time.

Our motivation for carrying out the study also arose from the larger education and learning questions of the 21st century, lifelong learning and education for sustainable development (ESD). In this complex and dynamic context, there is a need to re-imagine education with sustainability in mind, prepare minds to create new ideas to address complex problems, and foster responsible citizenship and solidarity towards sustainability transformations for the common good [9,10]. Bhaskar [11] defines common good in terms of the flourishing of one that is related to the flourishing of others. Recent studies conducted on climate change and sustainability competences in southern Africa have underlined the need for developing integrative skills to work with others, lifelong learning, multi-stakeholder learning and innovation partnerships, leadership and governance, and paying attention to the social dynamics of adapting to environmental change [12–14].

Our interest in seeking out solidarity-related qualities of T-learning in sustainability transformations arose from understanding that: (i) T-learning requires engaged forms of pedagogy that involve multi-voiced engagement with multiple actors, co-learning, cognitive justice, and individual and collective agency towards the development of personal and public good [15], and (ii) sustainability challenges require new forms and qualities of learning that allow people to transgress the taken for granted and the established order of things [16]. This implies the need for solidarity related competences that need to be developed in both the leaders and members of a group.

1.2. Conceptual Framing

We worked with the pedagogy of solidarity [17] as a sensitising concept for our study to help us frame how collective learning processes towards the development of competences to address the challenges being faced by the district organic association can be understood. We linked this pedagogy of solidarity to the African philosophy of *Ubuntu* and its sister concept of *ukama* as understood in Zimbabwe and many parts of southern Africa [18] in order to ground it in our context. *Ubuntu* is an African philosophy that relates to bonding with others, and to expressions such as I am because we are and I am human because I belong and I participate therefore I am and is present when there is humanness, solidarity, hospitality, generosity, sharing, openness, interdependence, collectivity and consensus [19]. *Ubuntu* has inspired Pan-Africanism and the African renaissance [20] and has been adopted outside Africa. For example, former American president Bill Clinton adopted *Ubuntu* diplomacy with a view to making America a convener that brings people from different regions

and sectors together to address matters of common interest [19]. In the world of computers, Linux developed Ubuntu software to be shared free of charge in the spirit of the philosophy [19]. Ubuntu and ukama mean relatedness to the cosmos, to the community, to the past, present and future generations, and to other cultures, connecting three ecologies of self, culture, and nature [18,21].

We found it useful to draw on CHAT as it is underpinned by an ontology of developing systems that recognizes that a ‘thing’ exists in terms of both its internal and external relationships and understanding these internal and external relationships forms the essence of understanding development [14]. Expansive learning, which grew out of CHAT, encourages the development of relational and collective agency and learning what is not yet there [22] and has been used to provide a framework for transformative collective learning processes.

Pedagogy of solidarity encourages productive engagement between actors towards transcending differences and boundaries and comprises three kinds of solidarity [17], which we find useful in this study:

1. Relational solidarity, which is committed to reciprocity, reflexivity associated with volitional decision to be with others, and the act of being with others as part of them.
2. Transitive solidarity, which involves taking action to change the way things are, in a reflexive process that transforms the agent in the processing of acting. The acting is informed but thinking about the world, reflecting on the action, with reflection itself as action.
3. Creative solidarity entails working with others to reveal new horizons against and produce new ways of being together, of making, feeling, creating and loving.

The African philosophy of Ubuntu, which is a strong part of the African and Zimbabwean intellectual and cultural heritages, promotes being, thinking and doing with others towards the common good. It is concerned with human interdependence, solidarity and communalism [23] premised on the thinking that for someone to become fully human they ought to relate with others in a respectful and positive way, recognise the humanity of others and do good for its own sake [24]. Murove [18] underlines the concept of ukama in the Ubuntu philosophy, which is concerned with relatedness with other people and places and linkages between the past, current and future generations in developing and sharing knowledge, moral values, and the natural heritage.

The value of purposeful solidarity is also embedded in expansive learning processes whose motive force lies in a partially shared object, problem or destiny [22,25]. The reframing of the shared object is conducted through drawing on conceptual tools that have been developed and drawing on the distributed cognition of concerned stakeholders, which speaks to the creative dimension of solidarity. However, at the centre of the expansive learning process is the desire to address contradictions that underpin obstacles through developing new solutions and forms of agency and relationships [26], which speaks to both relational and transitive solidarity.

Cultivating abilities to be with others, innovate and implement together towards just transitions, climate justice, decolonisation, creative labour and inventive praxis, new knowledge relationships, production relations, work cultures and technologies [27,28], leads us to the concept of competences, which is also important in this article. Competences refer to a combination of knowledge, skills, and attitudes needed to perform a task or solve a problem successfully [29]. There are many kinds of competences but the one that is most pertinent to this study and linked to solidarity and sustainability is interpersonal sustainability competences that include inter-dependence, synergy in ways of knowing, relating, working and living in the world [30].

Against this background, the main research problems revolve around how to make networked farmer groups or agricultural cooperatives better able to engage with complex self-organisation and solidarity for improved livelihoods, collective agency, synergy and collaboration with others and ecological sustainability.

2. Methodology

The methodological framing of the study drew on the demonstrated potential of CHAT's formative intervention methodology and change laboratory method as its application in the Zimbabwe transformative, transgressive and transdisciplinary learning research involving all the eight district organic associations [1]. A formative intervention methodology seeks to transform object-oriented activities in work organisations and communities by generating new models and instruments for an activity or practice [26] such as agriculture. It focuses on the development of collective transformative learning, actionable and societally impactful knowledge, the formation of volitional action and transformative agency and action [26]. Change laboratory is formative intervention research that was developed by Engeström in the context of CHAT research to support expansive learning, generate transformative learning and agency [26]. It is a place and a process where an activity or practice's historically emerging contradictions and conflicts of motives are analysed, reframed and transformed in a process of solution co-development, enrichment and mainstreaming into everyday practice [25]. The change laboratory method enables research the principles of double stimulation and ascending from the abstract to the concrete. Double stimulation recognises human beings' capacity to work together and transform complex situations through the use of conceptual tools (2nd stimulus) to understand and change a difficult problem (1st stimulus) [25]. The transformative agency, which taps into both relational and collective agency, is akin to relational solidarity.

Ascending from the abstract to the concrete, on the other hand, is concerned with the collective development of new concepts or models to transform a problematic situation or a contradiction. It resembles creative solidarity. The concept begins as abstract and is gradually enriched and transformed into societally actionable knowledge through "the interplay of the object under construction, mediating artifacts, and the different perspectives of the participants in a progression of collectively achieved actions" [31] (pp. 167–168). More importantly, perhaps, the process is based on learning actions, volitional choices and actions involving: (i) questioning, criticizing and rejecting some aspects of a practice or activity, (ii) analysing the situation for causal explanations and contradiction identification, (iii) modeling solutions to address the causes underpinning current challenges in the practice, (iv) testing and improving the model solution, (v) implementing the model solution, (vi) reviewing the solution based on practical application and making further enrichments, and (vii) consolidating and generalising the concept [22].

The study, which is spread over two years, from 2016 to 2018, is based on three change laboratory sessions with farmer representatives from the district association covering the first two steps outlined above. Excerpts from the conversations form the basis of the findings, discussions, and conclusions. The analysis is two-layered: inductive analysis to group similar ideas together and abductive analysis, which uses concepts to make sense of data from the three change laboratory sessions.

3. Findings

The findings reveal the matters of interest that were co-defined by HOPA representatives, highlights and analyses solidarity challenges that were faced by the newly established HOPA and concludes by analysing what made solidarity work for local organic farmer associations. These findings form the basis for the subsequent discussion and conclusion of the study.

3.1. Matters of Concern Identified

Matters of concern were identified during the first change laboratory sessions conducted held in August 2017, which was attended by 18 representatives of the Hwedza Organic Producers Association (HOPA). Matters of concern are issues that "involve us, touch and brush up against us, envelop us, or otherwise call on us to respond to them . . . things that matter make a difference" [32] (p. 3). Latour [33] suggests that if human beings are to resolve their problems, they should address matters of concern

and not matters of fact. Using the first step in the principle of ascending from the abstract to the concrete – questioning, critiquing and appreciation current practice and wisdom.

The second, third and fourth change laboratory sessions were held in October 2017 and involved 39 farmer representatives from the eight district organic associations, seven content specialists and two change laboratory specialists. During the second session, which focused on analyzing the matters of concern, the matters of concern were reframed to: (i) lack of cooperation and unhealthy competition between local groups who are members of the district association, (ii) poor coordination of production and marketing between the local organic associations who are members of the district organic association, and (iii) inadequate knowledge and experience of how to work together as a united district association with the same purpose but different resources, abilities and achievements.

We concluded that the core matter of concern was slow group development. It negatively impacted on collaborative planning, production, and marketing, which in turn undermined the potential negotiating power of the farmers with stakeholders such as buyers and policy makers. We treated this as solidarity, transformative agency and ukama matter of concern.

3.2. *Why Solidarity Was Problematic at District Association Level*

The third change laboratory session focused on analysing why solidarity was problematic in the Hwedza Organic Producers Association (HOPA) to understanding why solidarity was problematic at the district level. Farmer representatives went into two groups to examine why their district organic association did not take root when the local associations did and even after a promising structure had been developed as a model solution. They subsequently met in a plenary session and shared their findings. Below are excerpts that capture the reasons:

FPC 6: One thing that led to the shrinking of the project is the issue of pack shed. When the pack shed project started, we were mostly interested in gatherings, drinking, and eating. However, we had no knowledge of who owns the packing shed: the farmers or Fambidzanai? ... The other thing that is pushing the district association down is that we do not have a collective vision in terms of the pack shed ... The other thing is we have a donor syndrome ... We are not self-reliant as organic farmers ...

FPC11: We have organic farmers who have certificates and those who were trained but did not get certificates [of recognition as organic farmers]. So, most farmers faced the challenge when selling because they could not produce the certificates ... This prevented the farmers to sell their organic produce to national supermarkets, which had good prices ...

FPC12: The other problem was that of dropouts. The issue of the packing shed is the major contributor of dropouts because Fambidzanai stopped monitoring and supporting the progress when GardenAfrica could no longer provide funding.

FPC13: Another problem is that when the district association was formed, there was no way for interested farmers to join as individuals, they had to form or join a local association first.

FPC16: The other thing that threatened the district organic association was a lack of unity and coordination between the different sub-committee. Consequently, some committee members ended up not attending the district meetings.

We identified the following themes on solidarity from the excerpts:

- a. A shared and co-owned vision: Solidarity is undermined by a lack of a common vision, which suggests that a shared purpose and direction helps unite people. This means that the vision may be there, but the actors concerned do not identify with it, and therefore do not own it or the actions that are taken towards realizing it. This is where lack of ownership identified in the study comes in. One of the consequences of lack of a common vision and ownership is loss of interest in what is being done around the thing that is meant to unify actors, which in turn leads to loss of membership.
- b. Intrinsic or self-motivation: The farmers also identified habits that undermine solidarity, notably donor-dependence and lack of self-reliance. This implies that intrinsic or self-motivation is

- more important in building solidarity than extrinsic motivation, which comes from other people or organisations.
- c. Relationship building mechanisms: The absence of bridging mechanisms for coordinated and aligned decision-making between the different district association committees also undermined solidarity through not providing spaces for being together, relating with one another and acting together. This again resulted in disinterest and loss of participation by some members of the district leadership. A weak pedagogy of solidarity, therefore, undermined both relational and creative solidarity [17], and the co-development of knowledge that is not yet there [22].
 - d. A sense of fair treatment: Being treated differently by outsiders can also divide a group, whether this is intentional or not as illustrated in the case of trained farmers who received certificates and who did not. This goes against the spirit of ukama, a sense of relatedness [18].
 - e. Self-renewal: The last excerpt underlines the importance of providing opportunities for self-renewal and growth. This is aligned to transitive solidarity, which transforms the agent in the process of change-making [17].

The fourth change laboratory session focused on solution development. The solutions covered: (i) restructuring the district organic farmer associations and provide for training, production and marketing coordinators to become part of the local, district and provincial leadership, (ii) revising district constitutions accordingly, and (iii) collaboration with neighbouring conventional farmers and traditional leaders to address matters of common interest [1]. These included local watershed management.

3.3. How and Why Solidarity was Relatively Successful at Local Level

In fifth change laboratory session, which was conducted in Hwedza with members of HOPA only focused on how and why solidarity was relatively successful at local group levels to generate insight on group membership and leadership qualities and competences [34]. Below are excerpts on responses by HOPA's eight local associations during a district level session, which was preceded by eight local association level sessions on the same focus. The excerpts in Table 1 and subsequent paragraphs are coded according to the local associations from which the respondent comes, namely: IJ, JA, JL, MH, MW, SN, and ZK. In cases where the identity of the respondent is unclear, we have coded them R.

Table 1. Excerpts on solidarity enablers in local organic associations.

Question	Responses
What unites you as members of the same local association?	<p>ZK: What keeps us moving forward is the eagerness, the zeal to know more and more about organic farming.</p> <p>JA: What unites us is the passion to reach greater heights . . . to produce more and more healthy foods . . . to help a lot of people live a healthy living because of organic produces.</p> <p>MH: What unites us is the different goals and standards that we set when we started the association, therefore, everyone is now eager to see the end result of each and every goal that was set . . . We also have what we call contribution and participation. This means that a person is not only acquiring knowledge from others but also applying his or her own thoughts for the benefit of the association and also creates ownership.</p> <p>JL: What unites us as an association, is that we plan our activities together, which helps us understand each other. We are seeing a change from where we started.</p> <p>IJ: We have readily available resources to start our own activities on time.</p> <p>MW: What also unites us is we made a constitution, therefore, the way we work is governed by that constitution, therefore, members make sure they abide by the law . . . What motivates us the most is that we are able to obtain income to sustain our families . . . We started off with people who had interest in farming and people who were not all talk and less work.</p>
What unites your association with other local organic associations?	<p>MH: We are able to help each other with knowledge of growing crops . . . We need each other to make organic farming a productive process. We also shared a variety of seeds so that we are able to have crop diversity . . . However, disputes are always bound to happen there is a point in which I feel we (all the associations) do not have the same vision, as a district we have not been able to finish the pack shed as some feel it's not of greater importance but some of us feel we need this structure to boost production.</p> <p>MH: What also unites us as associations are that we are able to give each other information . . . The new associations are also showing a lot of eagerness to learn and they are also showing great interest in their work and this is a good start. Through the WhatsApp platform we are able to keep each other updated on meetings and events that are taking place in the district.</p>

Table 1. Cont.

Question	Responses
Who else or what else has fostered your solidarity?	<p>R1: An association doesn't solve its disputes but rather members of other associations come to solve disputes this applies to all associations so that a fair judgment is passed. Most of the time our local leaders are present when we solving these disputes, to show that we mean business.</p> <p>R2: Here in Hwedza everyone in the associations went through what we call organic standards training and also a pledge binding them to stick to the standards of organic farming therefore that binds us to follow the correct procedures, as organic farmers we have rules and regulations that we have set as PGS in Hwedza so these laws bind us to always keep ourselves on track.</p> <p>R3: We have a guiding constitution that every member is supposed to abide by. This means that when problems arise, we use the constitution to guide ourselves in solving them.</p>
You have been working together as local and district organic associations for a while. What has kept you together?	<p>JA: People were driven by love and passion for what they were doing.</p> <p>MH: We take Fambidzanai as our parents, therefore, we wouldn't want to disappoint them. Therefore, we keep on working hard and always strive for the best.</p> <p>R4: I noticed that there were some people who joined organic farming for the sake of the profits. So, when our produce was sold at the same prices as conventional produce, some members opted to go back to conventional farming. This is how we lost some members . . . Some of the associations were short-lived as they were not patient enough to see the fruitful outcomes as the business started very low.</p> <p>R5: Having people with a passion towards organic agriculture.</p> <p>R6: Having people who implemented things on the ground and showed results of what they were preaching.</p> <p>R7: Having people who were able to let others get an idea of what was happening in their world by giving them ideas and also encouraging them to build their own empires.</p> <p>R8: These people are driven by love and passion and also hardworking. They are not scared to take risks. They are willing to help those that have lost hope.</p>

The solidarity insights we could establish from the above excerpts include the following:

- a. Intrinsic motivation: Expressed as eagerness, passion, and zeal to meet own needs as well as those of the wider community, the 'love' for what they do, and not wanting to disappoint someone who cares.
- b. Hope for success: Defying odds individually and as a group is not only based on internal motivation but also on the likelihood of success in pursuing a joint initiative: "Having people who implemented things on the ground and showed results of what they were preaching . . . Having people who were able to let others get an idea of what was happening in their world by giving them ideas and also encouraging to build their own empires . . . people are driven by love and passion [and] willing to help those that have lost hope."
- c. Ownership or buy-in of goals and rules to achieve them: Expressed in terms of idea and knowledge contribution and participation that counts regarding why what and how things are done by the group. These include "standards of organic farming, therefore, that binds us to follow the correct procedures" and constitutions that guide problem solving.
- d. Fulfilling a felt need: This is summarised by MW: "What motivates us the most is that we are able to obtain income to sustain our families."
- e. Fair and just dispute mediation: This is captured by R1: "An association doesn't solve its disputes but rather members of other associations come to solve disputes this applies to all associations so that a fair judgment is passed. Most of the times also when solving these disputes, we will also be accompanied by the local leaders to show that we mean business."
- f. Reciprocity (information, ideas, and materials): "What unites us as an association, is we talk as a group and plan what activities we are going to partake in so that we understand each other . . . We need each other to make organic farming a productive process. We also lend each a variety of seeds so that we are able to have crop diversity."
- g. Continuous learning and quality performance: to stay abreast of new developments and to be able to perform work effectively partly through hard work and striving for excellence. It also requires patience, staying the course as obstacles are likely to be encountered and the benefits may take long to come.

The findings and analyses of the three change laboratory sessions lay the foundation for the discussion and conclusion in the next part of this paper.

4. Discussion and Conclusions

We conclude this paper by discussing: (i) what solidarity entails in a networked group or association, (ii) solidarity competences needed in networked groups, and (iii) solidarity related qualities of T-learning that arise during processes of transitioning towards just and sustainability transformations.

4.1. *What Solidarity Entails and Requires in a Networked Group*

The solidarity insights arising from the positive experiences of the local organic associations discussed in the paper suggest that networked solidarity is three-layered: within the individual, between individuals in a local group and between groups. Each member needs to feel valued by fellow members, which suggests that each individual member has a responsibility to value the other member. We did not investigate what makes members value each other but this would be important to establish in future research. Solidarity between individuals and groups demands relating to others, learning with them, acting with them and achieving or hoping to achieve with them. This is consistent with what historically made *nhimbe* or *umwe* work across social strata. Relatedness to other people and to the environment [18,35], which is the essence of the Ubuntu philosophy, is governed by rules or procedures in terms of internal relations, relations with stakeholders and division of labour, conceptual and material tools (such as the pack shed) that mediate the actors' relationship with what they want to transform [22]. Such rules can also be viewed as views rules as institutional norms, folk methods, generative codes, procedures, mechanisms and methodologies that reflexive agents possess and use as formulas for their actions in social systems [36]. The study suggests that such rules foster solidarity if the concerned people can identify with them and if they are applied fairly. This suggests that just transitions can benefit from just rules and their fair application. Secondly, the study suggests that when a group of actors owns a tool such as land or a packing shed, they are likely to feel a stronger sense of obligation to look after it than if they are not. In short, therefore, knowing and feeling that one has been involved in defining, why to do something, how to do it, with whom, with whose and what resources and under what conditions, fosters solidarity at multiple scales. This resonates with the insight that sustaining mutual engagement in a shared enterprise and collective ownership of meaning is essential for holding a community of practice together [37].

4.2. *Interpersonal and Leadership Competences for Supporting Solidarity Development*

Again, based on the insights arising from the local association discussions, we identified the following interpersonal competences as essential in group settings: (i) listening, (ii) empathy, (iii) mutual sharing of knowledge and generative resources (e.g. seed), (iv) collaborative problem solving, and (vi) tangible and intangible value creation or addition. We also identified a certain amount of self-reliance as a pre-condition for inter-dependence with others outside the group. These attributes of interpersonal competences are consistent with those identified in earlier studies, namely, the ability to think pluralistically and trans-culturally, communicate, deliberate, negotiate, collaborate, and empathize [38].

We based our conclusions on leadership competences for supporting solidarity development on the analysis of the change laboratory session held at FPC, which suggests that they need the capacity to: (i) foster collaborative development of a shared vision, (ii) relate with and motivate members to join, stay and make a difference, (iii) co-develop, articulate, revise and implement governance and leadership mechanisms, (iv) mediate in a fair and just manner, (v) cultivate self-reliance, which comes from a technical and practical knowledge of the practice, and (vi) adaptive planning for association growth and development. Adaptive planning was particularly essential when external funding to support district association development suddenly ended.

4.3. Insights into Solidarity Related Qualities of T-Learning

The study helped us identify two qualities of T-learning, which are informed by relational, creative and transitive solidarity as discussed below.

4.3.1. Co-Defining the Problem to Work on

We identified co-defining the problem to work on as a solidarity-related quality of T-learning based on the fact that the object carries the motive force of what the group, whether alone or networked, does [25]. In addition, we identified this quality based on the spelt need for co-developing a vision, ownership or buy-in of goals and rules to achieve them and from the problems associated with the lack of ownership of the pack shed. The collaborative definition of matters of concern is an essential part of the principles of ascending from the abstract to the concrete, which is applied in and through change laboratories [26]. The first step of critiquing current practice and wisdom for dissonances are the second step of analysing for contradictions and explanations are critical for co-defining the matters of concern. In this regard, Freire [39] advocates the development of critical consciousness and dialoguing to raise problems and critique knowledge and values that hegemony towards the creation of a just society.

4.3.2. Co-Developing New Horizons

We identified the co-developing of new horizons as a solidarity-related quality of T-learning. Creative solidarity was particularly useful in enabling local organic farmer associations to learn what is not yet there, co-develop new objects to work on, new ways of being and learning together [17,22]. A new horizon was also co-developed at the district networked group level as well, which had higher ambitions and planned higher levels of achievement and influence than the group level. In both cases the horizons were defined in terms of organic production and marketing horizons and responsible use of land and other resources towards ecological sustainability. As McAllister [40] notes, when agroecological farmers form tight bonds of solidarity, they are better able to transform relationships between people and their landscapes. The co-defined new matters of concern and new horizons through T-learning driven forms of ukama could become part of a quiet revolution to sustainability that is less visible, difficult to institutionalise and yet highly significant [41].

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