

Welcome!

**Farm-Based Education for Food System
Transformation: A Master's Thesis Dialogue
with Shelby Geitner**

3.30pm - 4.45pm EST

May 25, 2022

Program Outline:

1. Who am I and what is this thesis about?
3. Exploratory Stage: Finding Research Questions
4. Research Question 1: Balancing Production and Education
5. Research Question 2: Connecting to Food System Transformations

Notes:

-This document is meant to accompany a recorded meeting of a discussion session held online through the Farm-Based Education Network. The video recording can be found here:

<https://drive.google.com/file/d/1hF06l4pxLemraxWOUkwIDc0j7N6UnZzD/view?usp=sharing>

-This document expands on material covered in the video, includes new material not seen in the video recording, and includes more reflection questions.

-If you would like to share responses (written or audio) to the reflection questions, please let me know! This is a huge aid to the research project. Please also reach out with any feedback, comments, or concerns.

Thank you!

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Hi! I'm Shelby.

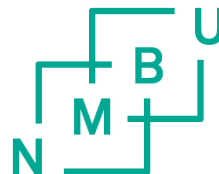
Outdoor Educator



Farmer



MsC in Agroecology



Norwegian University
of Life Sciences

So, what is this thesis about?

Farm-Based Education!

- Balancing Food Production with Education Programming-
- Supporting Sustainable and Ethical Food System Transformations-
- Common Challenges and Building Organizational Resilience-

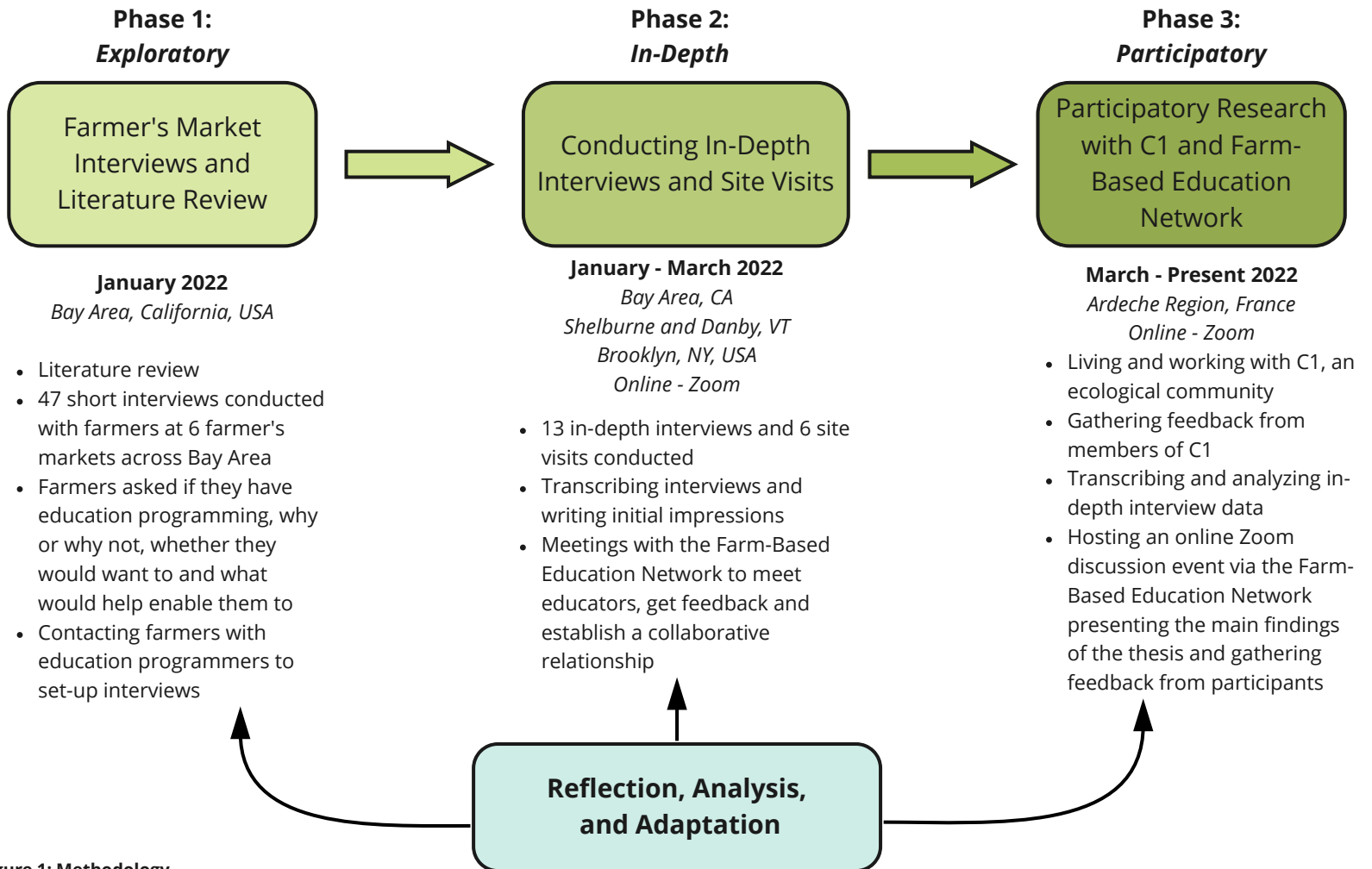


Figure 1: Methodology

Exploratory Stage: Finding Research Questions

1st Inquiry

Farmer's Market Interviews

January 2022

*Bay Area, California, USA
(where I am from)*

- 46 short interviews conducted with farmers at 6 farmer's markets across Bay Area
- Farmers asked if they have education programming, why or why not, whether they would want to and what would help enable them to



Farmer's Market Interview Results

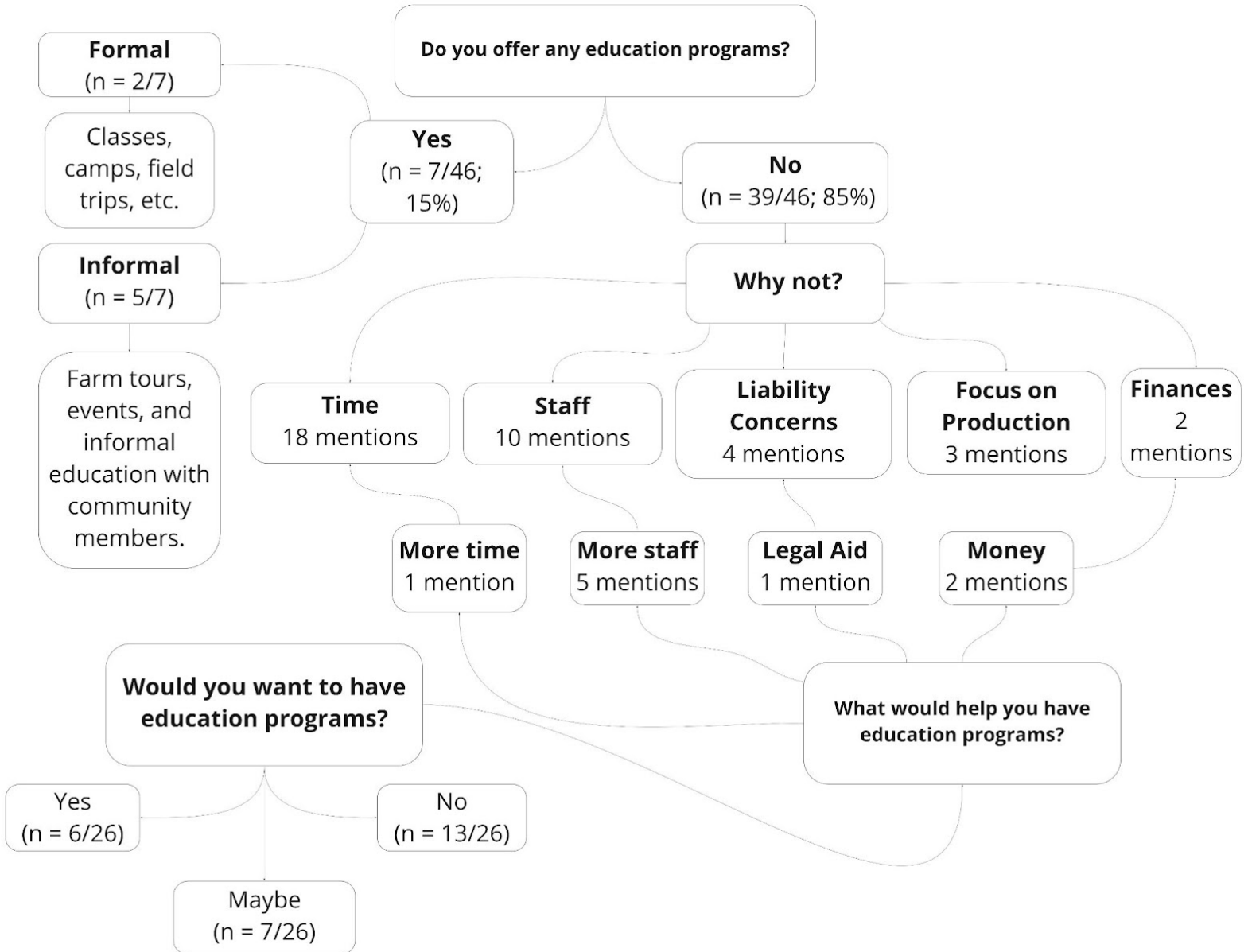


Figure 2: Farmer's Market Interview Results

Do you offer any education programs?

Yes
(n = 7/46; 15%)

No
(n = 39/46; 85%)

"I'm too busy...
When you can't
manage your
farm, you can't
offer education"

"we're focused
on production"

"There's no
time"

"it's just me and my
wife... maybe if we
had more staff"

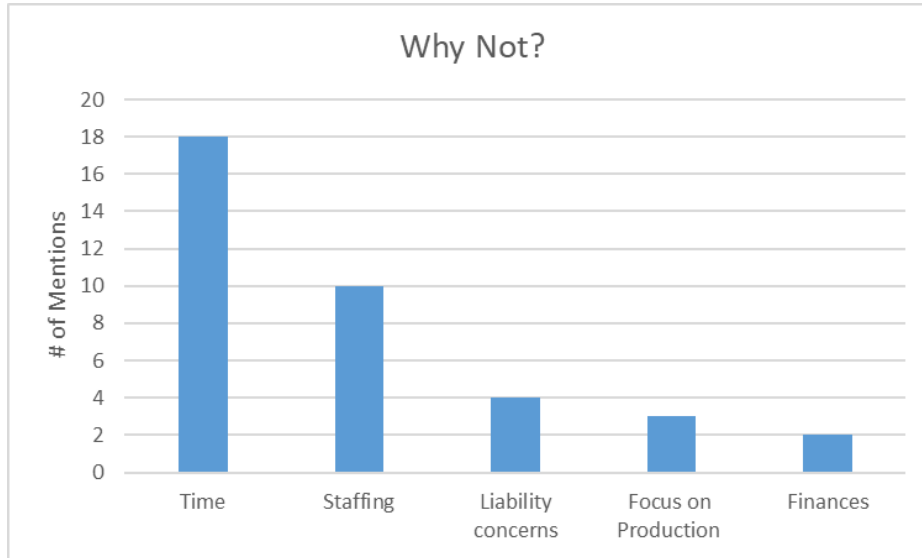


Figure 2: Why not have education programming?

Farmers gave a variety of reasons for not hosting education programs, but by far, the most common factor was time. A **focus on production rather than education** came up in many discussions with farmers as well. These discussions led me to my first research question...



Research Question #1:

How do organizations balance food production with having pedagogical activities?

***I ranked each of the 14 case study organizations on a relative spectrum of how much they valued having educational activities (left-side) versus producing food (right-side). These were relative rankings. All case study organizations interviewed valued both, just not necessarily equally.**

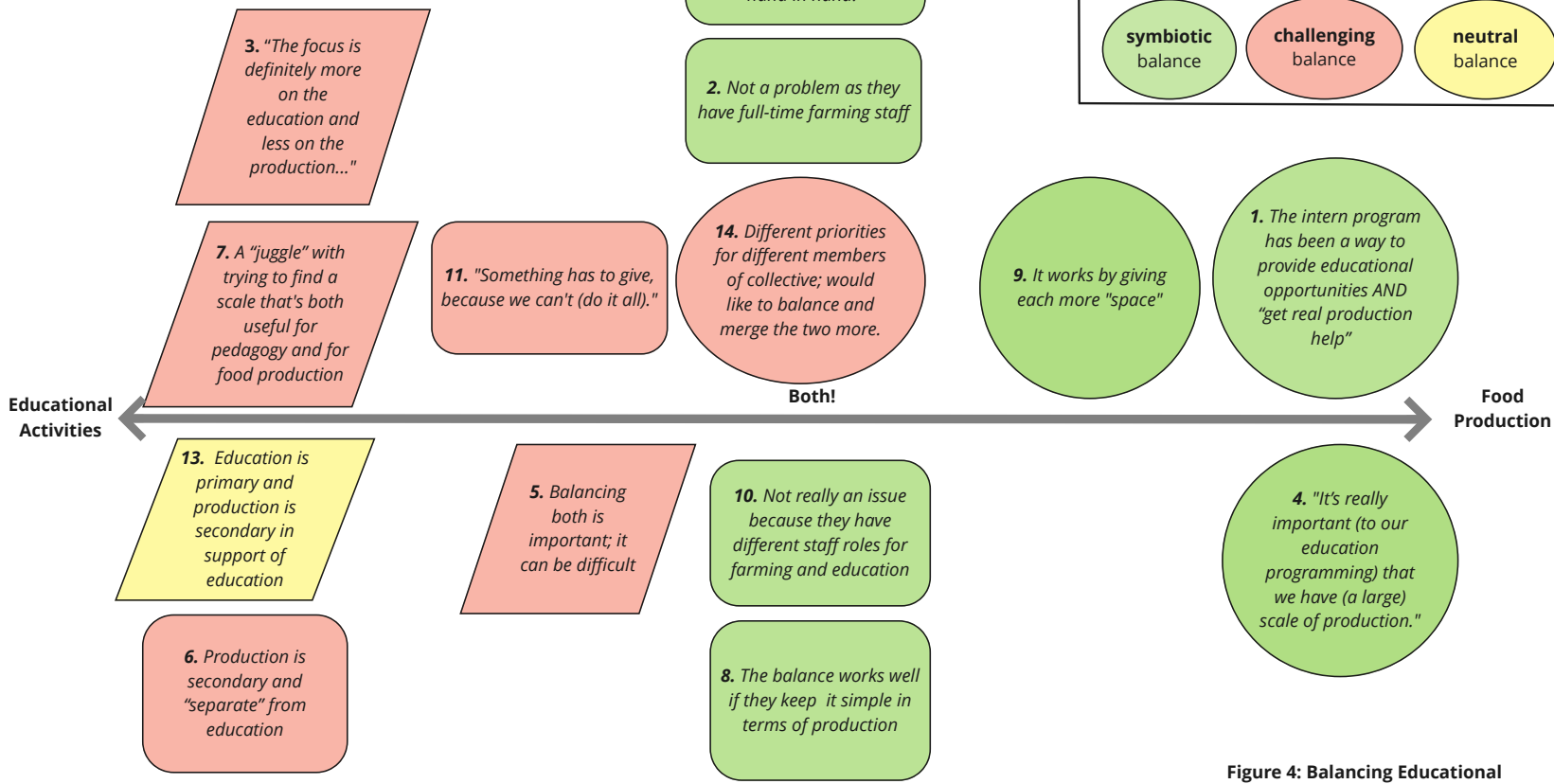
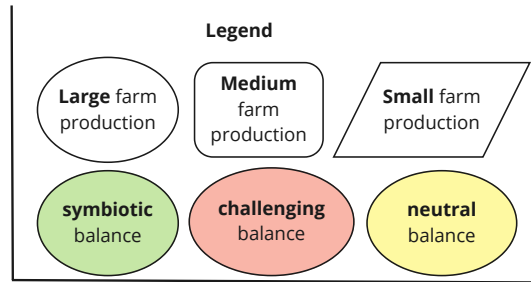


Figure 4: Balancing Educational Activities and Food Production

Reflection Questions for You...

How does your organization balance farming with education?

What is difficult about doing both?

What is helpful in doing both?

Balancing Production and Education: Major Takeaways

Can you do both?

You can absolutely do both and many organizations are successfully!

Is it a "balancing act?"

Results were mixed in terms of how organizations viewed "balancing" producing food and having education activities. Around half of the organizations described a symbiotic relationship (those in green in Figure 4) where producing food helped with their educational programming and their educational programming helped with their food production. Around half of the organizations described a challenging relationship and/or were not satisfied with their current balance between both activities (indicated in Figure X by the color red). These organizations described a situation in which at least some of the time, one activity reduced their ability to realize the other activity to satisfaction.

Does scale of production matter?

Organizations with larger scales of production tended to find the "balancing act" easier than those producing at a smaller scale of production.

What's helpful in doing both?

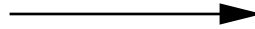
1. **Staff!** Having both full-time farming *and* education staff who communicate clearly and frequently together.
2. **Space!** Having a "learning" garden/farm space that is separate from a market garden/farm production area.
3. **Time!** Having designated farming-only time and pedagogical-farming time seemed to help organizations stay on top of both.
4. **Long-term, service-based learning opportunities** like internships and apprenticeship programs where teens/young adults are learning *through* working and eventually having ownership over a variety of farm tasks for an extended period of time.

**Exploratory Stage:
Finding Research Questions**

1st Inquiry

Literature Review

November 2021 - Present



- 1. Critical Food Systems Education**
(Meek and Tarlau, 2016; 2019)
- 2. Transformative Education Theory**
(Anderson et al. 2019)

Research Question #2:

How are farm-based education programs connecting to broader sustainable and ethical food system transformations in their respective regions?



Research Question #2:

How are farm-based education programs connecting to broader sustainable and ethical food system transformations in their respective regions?

1. Critical Food Systems Education

(Meek and Tarlau, 2016; 2019)

2. Transformative Education Theory

(Anderson et al. 2019)

These two theories shaped my analysis:

1. Critical Food Systems Education offered the concepts...
2. Transformative Education theory offered *how* education can connect to food system transformation

Major Themes of Analysis

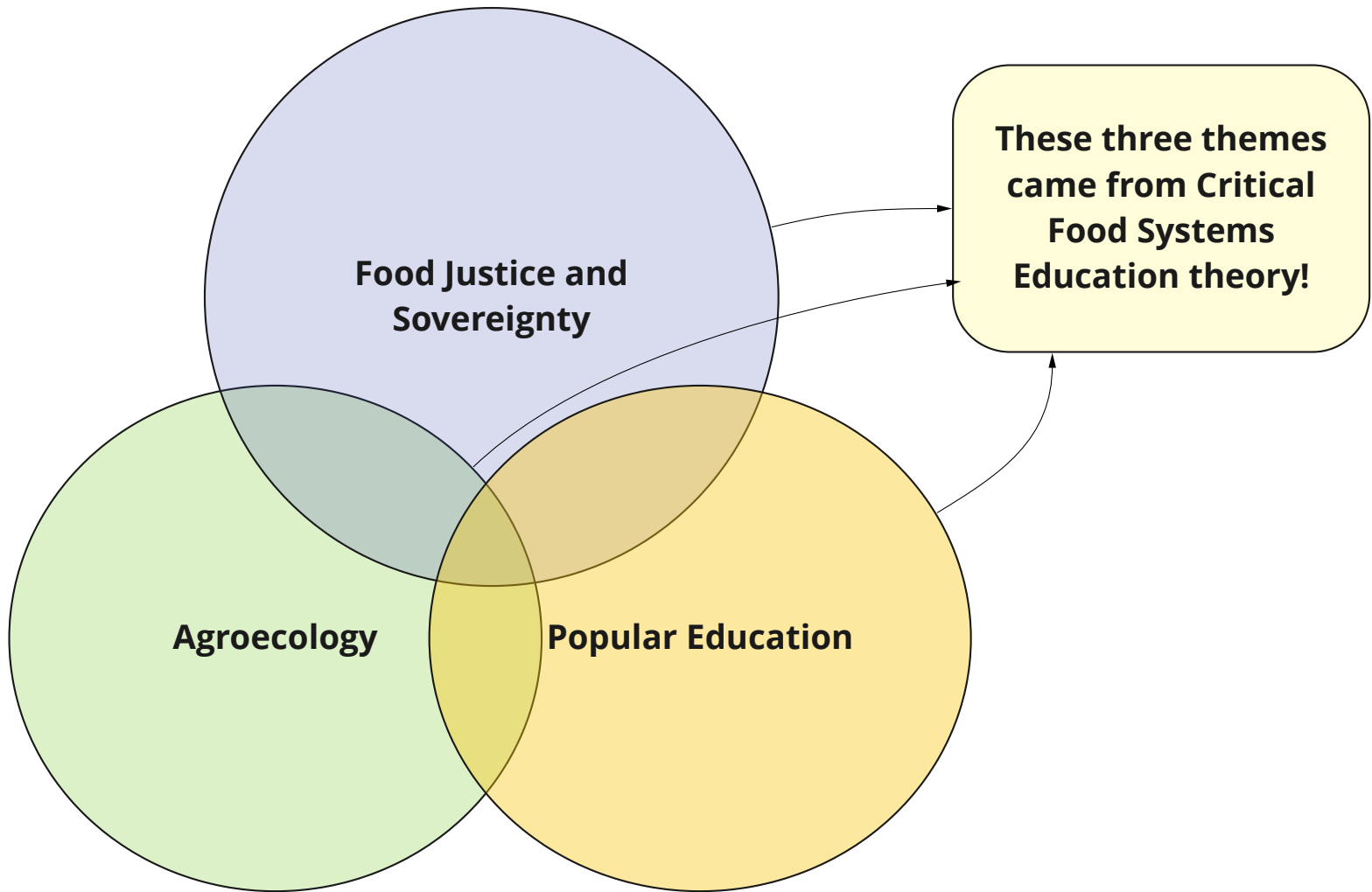


Figure 5: Major Themes of Analysis

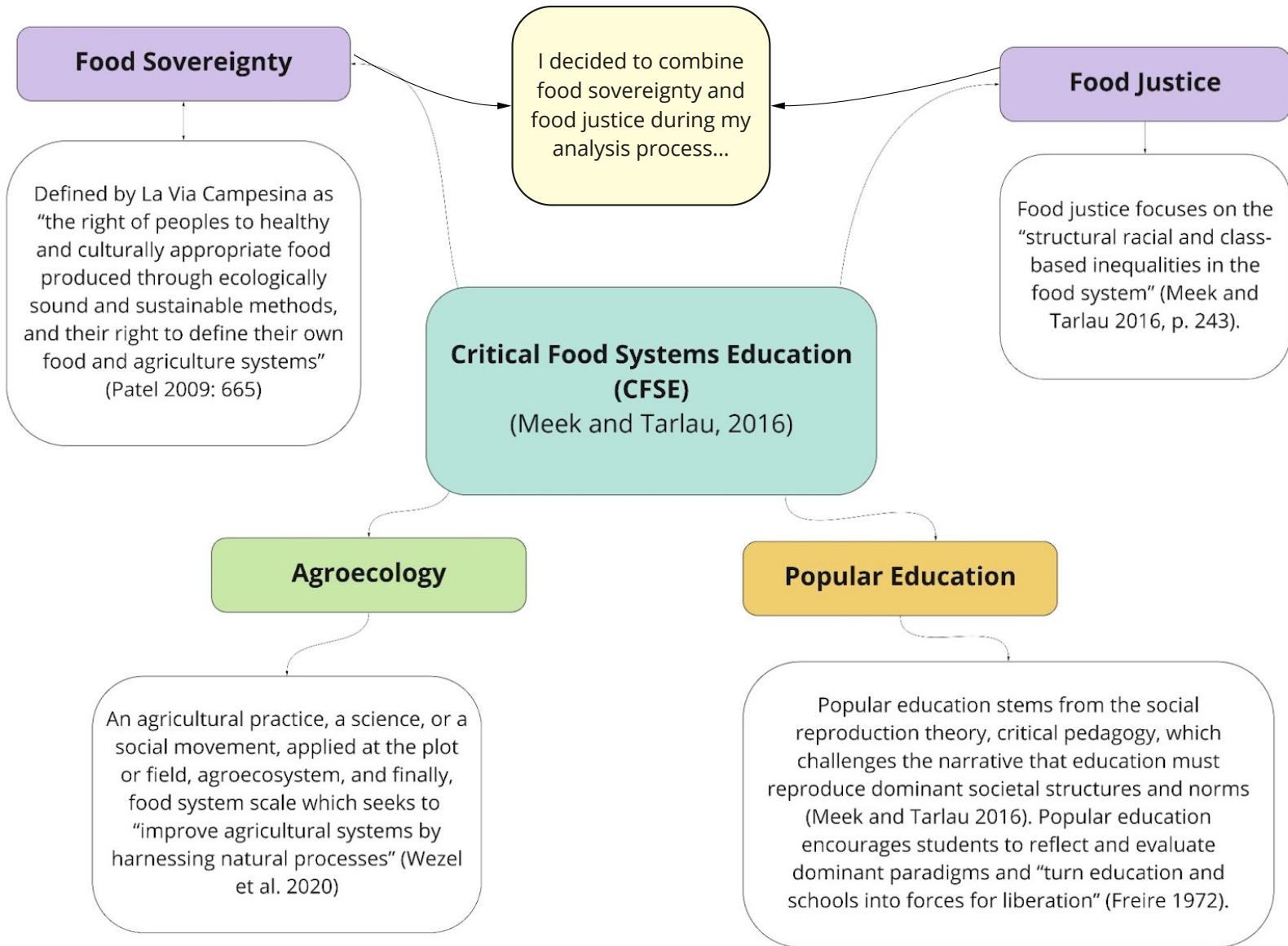


Figure 6: CFSE Explained

Figure 7:
Transformative
Agroecology
Learning
Explained

Agroecology, popular education, food justice, and food sovereignty are all great concepts, but *HOW?*

This is where "**Transformative Agroecology Learning**" theory (Anderson et al. 2019) comes in handy!

Anderson et al. (2019) looked at lots of organizations taking actions to connect to food system transformations and found **four unifying characteristics...**

Horizontalism:

Democratic communications within education systems which seek to be non-hierarchical and anti-authoritarian (Anderson et al 2019).

Wisdom Dialogues:

intergenerational and inter-place dialogues between food producers, food system actors, students, and formal and informal education and research institutions (Anderson et al 2019).

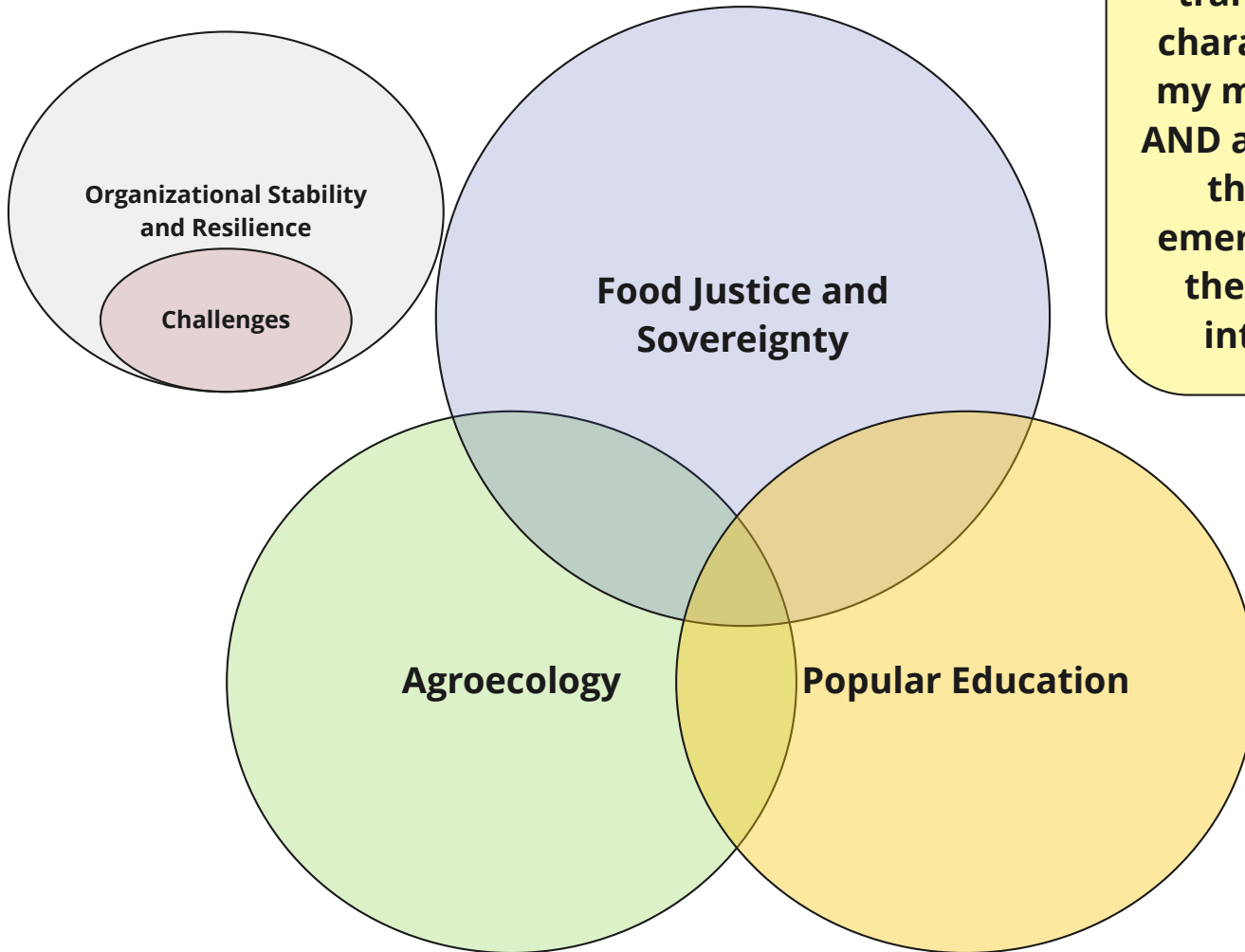
Building Social Movements:

Connecting with "nested local organizations" to create collective action at community (and beyond) scales. (Anderson et al. 2019)

Combining practical and political knowledge:

This starts from youth education, where "linking localized learning activities to global discourses of food sovereignty and agroecology" helps productively politicize education programs. (Anderson et al. 2019, p. 541)

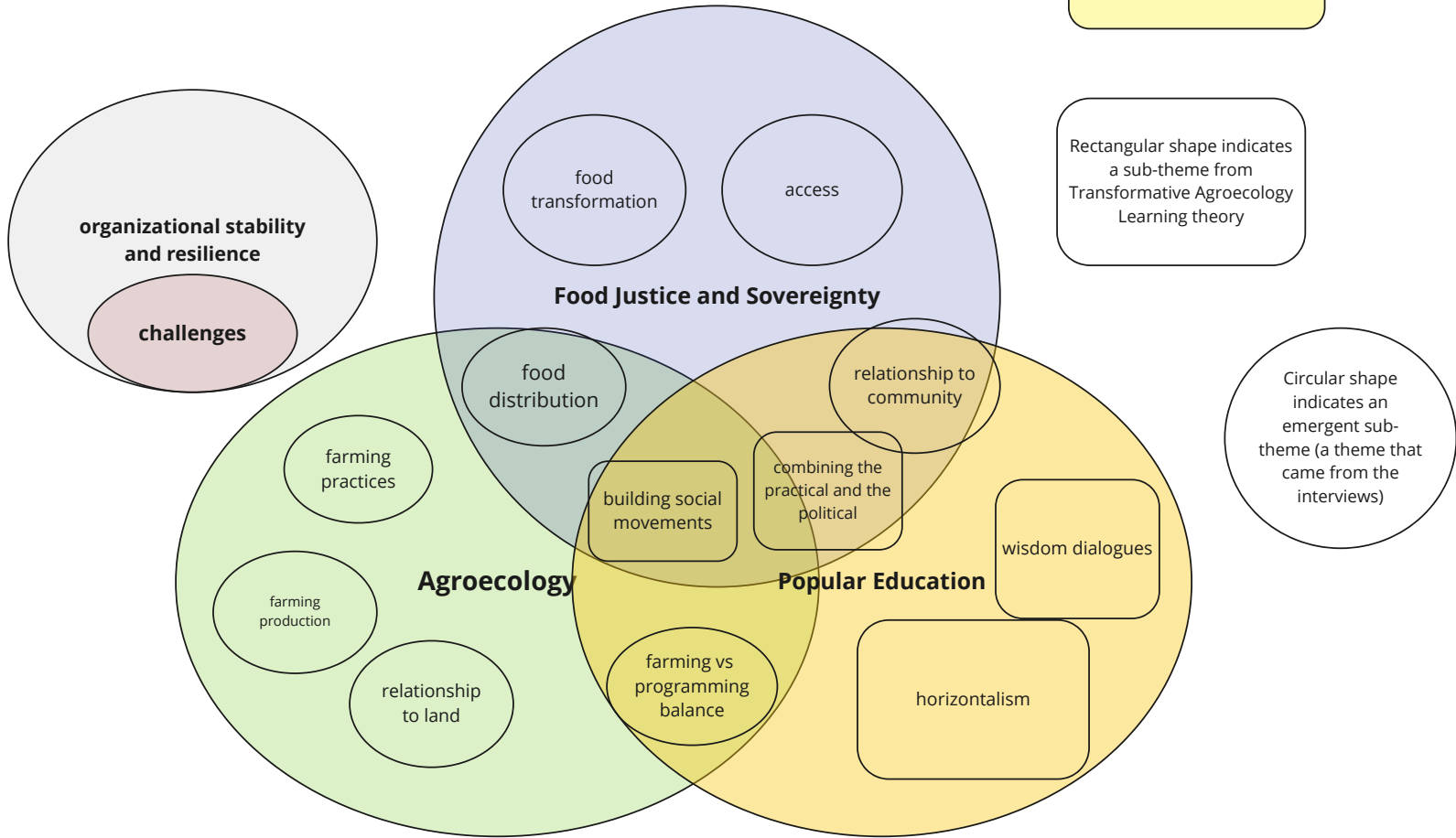
Major Themes of Analysis



So I added the four transformative characteristics to my major themes AND added themes that I found emerged through the case study interviews...

Major Themes of Analysis plus Sub-Themes*

... And got this!



***I analyzed each case study by looking at what they were doing within each of these themes and sub-themes! Information came from both interviews and textual analysis of organization documents.**

Figure 8: Major Themes of Analysis plus sub-themes

Food justice:

Focuses on the “structural racial and class-based inequalities in the food system” (Meek and Tarlau 2016, p. 243).

**Major Theme:
Food Justice and Sovereignty**

Food Sovereignty:

Defined by La Via Campesina as “the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems.” (La Via Campesina, 2020).

Sub-Themes Explored for Each Case Study:

Food Distribution
Food Transformation
Increasing Access
Relationship to Community
Building Social Movements*

* = one of Anderson et al. (2019)'s four transformative characteristics

Table 1: Example actions case study organizations were found to be taking within the theme of Food Justice and Sovereignty...

Major Theme <i>Sub-theme</i>	What actions are organizations taking that demonstrate this theme/sub-theme?	What helps organizations take these actions?	What is challenging about taking these actions?
Food Justice and Sovereignty <i>-Food Distribution</i> <i>-Food Transformation</i> <i>-Increasing Access</i> <i>-Building Social Movements*</i>	<ul style="list-style-type: none"> • Free/low-cost and accessible food distribution^{3,4,5,6,7} • Transforming foods on-site (and involving youth and community in this process)^{8,9} • Increasing community involvement through hosting community relevant and open events, gatherings, and workshops • Removing physical, financial and social barriers to food, farming, land, and programming^{12,13,14,15} • Involving community/youth in farming decisions to produce community-relevant foods¹ • Creating adaptive gardening spaces • Partnering with other community organizations which have "mission-alignment"^{10,11} • Applying critical thinking and discussion skills to real-life social justice issues • Teaching anti-racism and anti-colonialism • Critical introspection on land history and power/privilege supported organizationally¹⁸ • Food justice/social justice trainings for educators and staff¹⁷ 	<ul style="list-style-type: none"> • Dedicated food justice and community organizing roles • When working towards food justice/sovereignty goals is in the mission statement! • Racial, cultural, social, gender, etc. staff diversity • Organization began from <i>within</i> the community it seeks to serve 	<ul style="list-style-type: none"> • Finding staff who are competent, committed, and reflective of the community they are serving • Language and cultural barriers to inclusivity • Systemic structures which maintain power imbalances

Specific Actions Taken by Organizations

Food Justice and Sovereignty

a. Food Distribution

- i. *Ex. 4: Farm 2* donates all food to local food banks and distribution networks, has a free food fridge on-site, and offers weekly free harvest-what-you-want days;
- ii. *Ex. 8: Farm 7* works with a non-profit gleaning food access program which harvests and transforms their extra produce;
- iii. *Ex. 6: Farm 8's food hub project* is using grant funding to pay full-price for produce from local producers, pack it, and distribute boxes out to families in need; at the height of the program, they were delivering 800 boxes/week thanks largely to volunteer coordination and grant funding; it's still in existence now but the grant is done so it's "philanthropically funded" and at a smaller scale (60 to 200 boxes/wk);
- iv. *Ex. 5: Farm 9* donates food to local school where school cafeteria uses produce; also have an "opt-out" produce bag program at school during summer;
- v. *Ex. 7: Farm 10* has a **Farm to Fridge** program where everything produced at their farm is put daily right into a large free fridge right on the curbside that anyone can take from and give to; also filled w/ donations from stores like Trader Joe's donating 2nd tier produce → "we're basically intercepting food waste";
- vi. *Ex. 3: Farm 12* hosts farmer's markets on-site each weekend at which they provide space for their community gardeners to sell produce and value-added products like hot sauces and relishes; they give the foods they produce at their own farm away for free at these markets;

b. Food Transformation

- i. *Ex. 8: Farm 3* has an outdoor kitchen which their students use to make themselves lunch using farm ingredients every day;
- ii. *Ex. 9: Farm 8* has a culinary program with youth where they do a farming activity, harvest, and make lunch with students while discussing the history of each ingredient and social and environmental justice issues surrounding

Note: this is just an excerpt. For the full list of actions taken by organizations, please read the full-thesis coming soon!

**Reflection Questions
for You...**

What actions does your organization take that may fit within the theme of "food justice and sovereignty?"

What actions *could* your organization take in the future? Try thinking realistically along different time-frames (within 1-year, within 5-years, etc).

What would be hard about taking these actions?

Major Theme: Agroecology

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graph TD; A([Major Theme: Agroecology]) --> B([Agroecology can be a "movement, science, or a practice" (Wezel et al. 2020)]); B --> C([For the sake of the thesis work, I focus on agroecology as a set of agricultural practices which "improve agricultural systems by harnessing natural processes" (Wezel et al. 2020)]); C --> D([Sub-Themes Explored for Each Case Study: Farming Practices Relationships to Land Land Management]);
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Agroecology can be a "movement, science, or a practice" (Wezel et al. 2020)

For the sake of the thesis work, I focus on agroecology as a **set of agricultural practices** which "improve agricultural systems by harnessing natural processes" (Wezel et al. 2020)

Sub-Themes Explored for Each Case Study:
Farming Practices
Relationships to Land
Land Management

Table 2: Example actions case study organizations were found to be taking within the theme of Agroecology...

Major Theme Sub-theme	What actions are organizations taking that demonstrate this theme/sub-theme?	What helps organizations take these actions?	What is challenging about taking these actions?
Agroecology -Farming Practices -Relationships to Land -Land Management	<p><i>Farming Practices:</i></p> <ul style="list-style-type: none"> • Building soil₁ <ul style="list-style-type: none"> ○ Cover cropping ○ Crop rotations ○ Fallow periods ○ Natural mulching and tarping ○ Relatively shallow, infrequent, or no tilling • Efficient on-site nutrient cycling_{2,3} <ul style="list-style-type: none"> ○ Composting (biodynamics, compost-tea, vermiculture, etc) ○ Integrated animal-crop systems ○ Efficient irrigation methods • Seed-saving₄ <p><i>Relationships to Land:</i></p> <ul style="list-style-type: none"> • Focus on interaction between humans and land through: spiritual, cultural₅, and historic relationships, with special focus on Native and colonial histories₆ • Building land stewardship through farming and consistent interactions by youth and community with land across time₇ • Land as a learning platform₈ • Reciprocity with land – “give back what you take”₉ <p><i>Land Management:</i></p> <ul style="list-style-type: none"> • Managing wetlands, natural margins, non-cultivated, and conservation areas_{10,11} • Supporting nature access opportunities₁₂ • Supporting biodiversity <ul style="list-style-type: none"> ○ Diverse crop production ○ Growing pollinator-supporting species 	<ul style="list-style-type: none"> • Dedicated farming and education staff roles • Building curriculum which balances both farming and educational needs • Strong communications between farm and education staff • Planning for education time and space in farm management • Diversified selling and distribution avenues • Continuous training and reflection activities for staff 	<ul style="list-style-type: none"> • Can be hard to train staff, particularly youth interns, when production is so diverse and complex • Diversified systems are complex and can be difficult to manage • Requires time and dedication to researching land history • Engaging in sometimes “uncomfortable” conversations regarding colonialism, racism, power, and privilege

Specific Actions Taken by Organizations

Agroecology

a. Farming Practices:

i. Building Soil

1. *Ex. 1: Farm 9* follows regenerative agriculture approaches and view themselves as “soil farmers,” trying to build up healthy soil life after years as a conventional farm. They build soil by leaving fields fallow, rotationally grazing their animals, not driving tractors and only tilling with a hand-held roto-tiller.

ii. Efficient on-site nutrient cycling

1. Composting (biodynamics, compost-tea, vermiculture, etc): *Ex. 2: Farm 6* includes composting activities in every school field trip and uses acting and role-playing to teach composting biology
2. Integrated animal-crop systems: *Ex 3: Farm 4* maintains an intense rotational grazing system for their animals; grasses are constantly monitored for root health and animals are rotated accordingly;
3. Efficient irrigation methods: drip irrigation, water catchment systems, etc.

iii. Seed saving: *Ex. 4: Farm 3* incorporates seed-saving into education curriculum with youth, having youth collect, label, store, and plant seeds.

b. Relationships to Land:

i. Through spirituality and culture: *Ex. 5: Farm 2* uses the Jewish cultural and spiritual backgrounds of their students to build connections to the land and to students’ own ancestry

ii. Through history, with special focus on Native and colonial land relationships: *Ex. 6: Farm 13* is using land-based learning as a pedagogical style to both teach anti-racism and anti-colonialism (through learning regional history) and decenter racism and colonialism through building a new relationship and connecting to land through farming

iii. Through consistent relationship to land across time; *Ex. 7: Farm 7* works with the same elementary school kids from kindergarten until graduation; kids come back multiple times every year and do different activities that line up with what they're learning in school; "they have stake and some ownership"

Note: this is just an excerpt. For the full list of actions taken by organizations, please read the full-thesis coming soon!

**Reflection Questions
for You...**

What actions does your organization take that may fit within the theme of "agroecology?"

What actions *could* your organization take in the future? Try thinking realistically along different time-frames (within 1-year, within 5-years, etc).

What would be hard about taking these actions?

**Major Theme:
Popular Education**

Challenges the narrative that education must reproduce dominant societal structures and norms (Meek and Tarlau 2016). Popular education encourages students to reflect and evaluate dominant paradigms and “turn education and schools into forces for liberation” (Freire 1972).

Sub-themes:

*Horizontalism**

*Wisdom Dialogues**

*Combining the Practical and
Political**

Creative Expression

* = one of
Anderson et al.
(2019)'s four
transformative
characteristics

Table 3: Example actions case study organizations were found to be taking within the theme of Popular Education

<p>Popular Education <i>-Horizontalism</i> <i>-Wisdom Dialogues</i> <i>-Combining the Practical and Political</i> <i>-Creative Expression</i></p>	<ul style="list-style-type: none"> • Giving youth responsibility and ownership^{35,36} • Educators act as mentors, facilitators, and guides³⁷ • Youth work alongside community members³⁸ • Youth visit other community food system organizations³⁹ • Inter-generational mentorship opportunities⁴⁰ • Inter-occupational team-based approach⁴¹ • Youth practice community organizing skills⁴² • Develop leadership and conflict-resolution skills⁴³ • Mixing “hard” farming and “soft” mindfulness and community-building skills⁴⁴ • Using real and meaningful farm tasks to frame education⁴⁵ • Using farm landscape ecology to teach about modern food systems issues like industrialization, globalization and hyper-processing of foods⁴⁶ • Creative expression, storytelling and arts as a way to discuss complex topics like social and environmental justice, colonialism, power and privilege⁴⁷ 	<ul style="list-style-type: none"> • Dedicated educator staff roles • Grants and non-revenue based funding • Non-profit or separate non-profit and for-profit entities • Educators trained with a student-first approach as “facilitators,” “guides,” and “mentors” • Students have access to farm space <i>consistently across time</i> 	<ul style="list-style-type: none"> • Requires higher staff: student ratios which can be costly • Finding “the right” staff • Sometimes important farm tasks are difficult to fit into education programming (due to timing, difficulty, <i>etc</i> of tasks)
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Specific Actions Taken by Organizations

3. Popular Education

a. Horizontalism

- i. Giving Responsibility and Agency to Youth: *Ex. 35, Farm 12* has their youth interns “run the show” at their weekly farmer’s markets. The interns are in charge of harvesting, washing, setting up the stands, selling, and running the market operations; *Ex. 36, Farm 13* gives their members “full autonomy” in designing and implementing their sustainable food curriculum; this autonomy and responsibility is paired with support like check-ins and facilitated professional development
- ii. Educators as Mentors, Facilitators, and Guides: *Ex. 37, Farm 8* sees the role of an educator as facilitating what students want to learn about and empowering them to rise to their fullest capacities through listening, adapting to students’ needs and desires, and trusting in students’ abilities

b. Wisdom Dialogues

- i. Youth working alongside community members: *Ex. 38, Farm 12* has student interns work for community backyard garden program members on-site at members’ backyard gardens
- ii. Youth visiting and working with other community food system organizations; *Ex 39, Farm 7* has students interview school staff, parents, local farmers, and community members about food systems related issues
- iii. Inter-generational mentorship opportunities: *Ex. 40, Farm 3 – San Francisco* has a “garden buddy system” where each older kid mentors a younger kid in the garden through the school year;
- iv. Inter-occupational mentorship opportunities: *Ex. 41, Farm 2* has fellows volunteer once a week for local food pantry and food distribution organizations so they can see what happens with food after it leaves the farm

c. Connecting the Practical and Political

- i. Youth practice their community organizing skills: *Ex. 42, Farm 12* youth put on events for the community, organizing, marketing, and running entire events.
- ii. Developing leadership and conflict-resolution skills: *Ex. 43, Farm 12* uses a conflict resolution strategy called “Straight Talk” in which they chat one-on-one with youth interns regularly throughout their employment to make sure they are feeling okay and growing where they would like to. They use a three-strike policy for conflict management and talk with youth at each strike “about their capacity and what’s going on for them.”
- iii. Mixing “hard” farming and “soft” mindfulness and community-building skills: *Ex. 44, Farm 2’s* fellowship

Note: this is just an excerpt. For the full list of actions taken by organizations, please read the full-thesis coming soon!

**Reflection Questions
for You...**

What actions does your organization take that may fit within the theme of "popular education?"

What actions *could* your organization take in the future? Try thinking realistically along different time-frames (within 1-year, within 5-years, etc).

What would be hard about taking these actions?

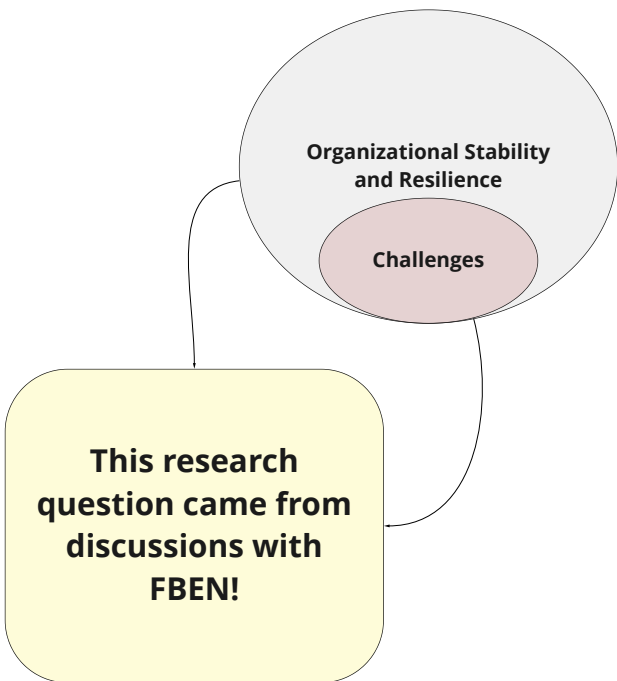
RQ2: How are farm-based education programs connecting to broader sustainable and ethical food system transformations in their respective regions?

Major Takeaways:

Agroecology, food justice and sovereignty, and popular education can be helpful concepts in answering this question!

Organizations are connecting to food system transformations in a variety of ways including: agroecological farming practices, relationships to land and land management strategies; increasing access to their land, food, and programming; building up regional social movements*; and incorporating horizontalism*, wisdom dialogues*, practical and political skill-building*, and creative expression into their pedagogical approaches.

RQ3: What are common challenges farm-based education organizations face and how are they building organizational resilience?



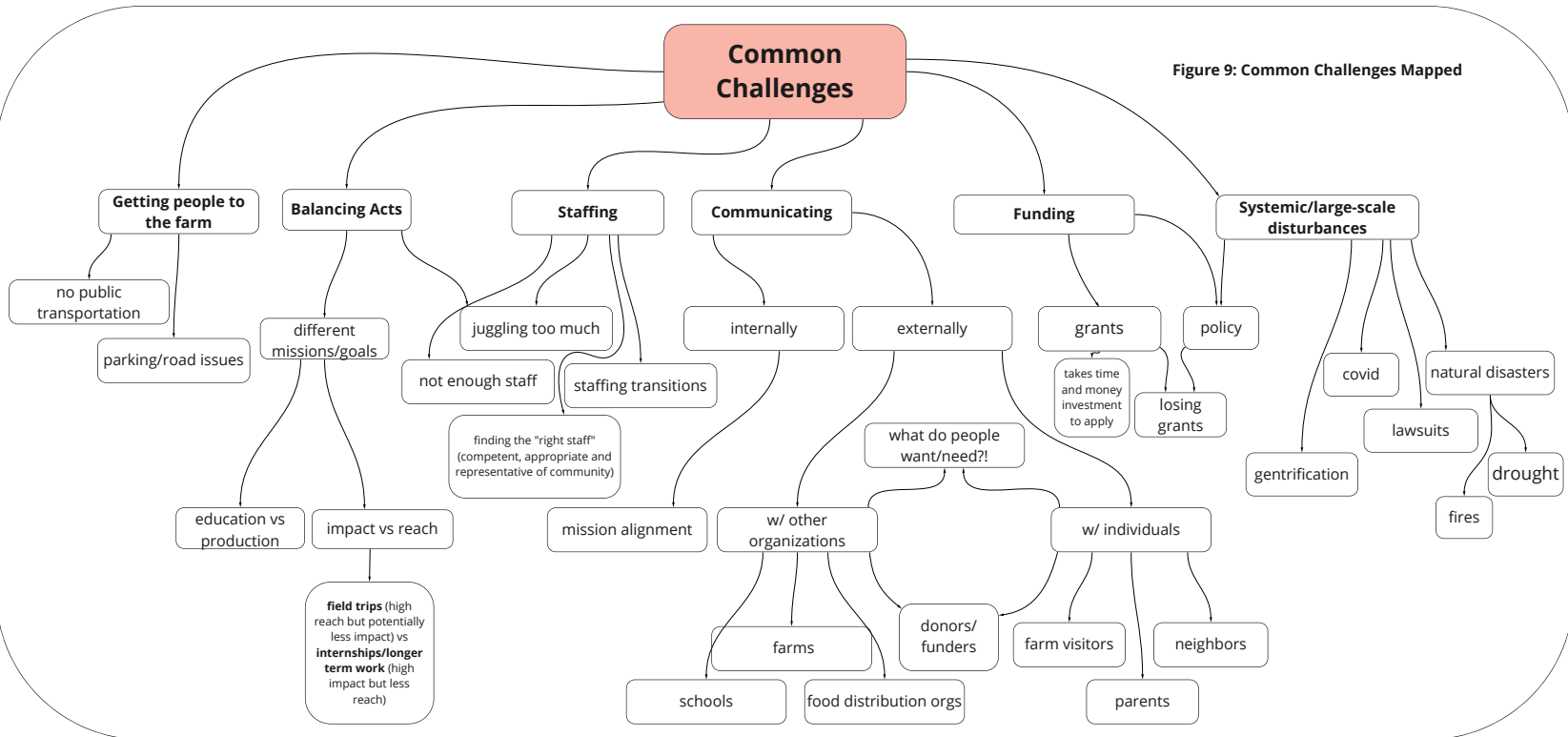
**Major Theme:
Common Challenges**

Sub-themes found:

- Getting People to the Farm
 - Balancing Acts
 - Staffing
- Communicating
- Funding
- Systemic/Large-Scale Disturbances

Common Challenges

Figure 9: Common Challenges Mapped



**Reflection Questions
for You...**

What are the challenges that you most commonly face?

Do some of these challenges in Figure 9 resonate with you?

Does your organization experience challenges that don't appear in Figure 9?

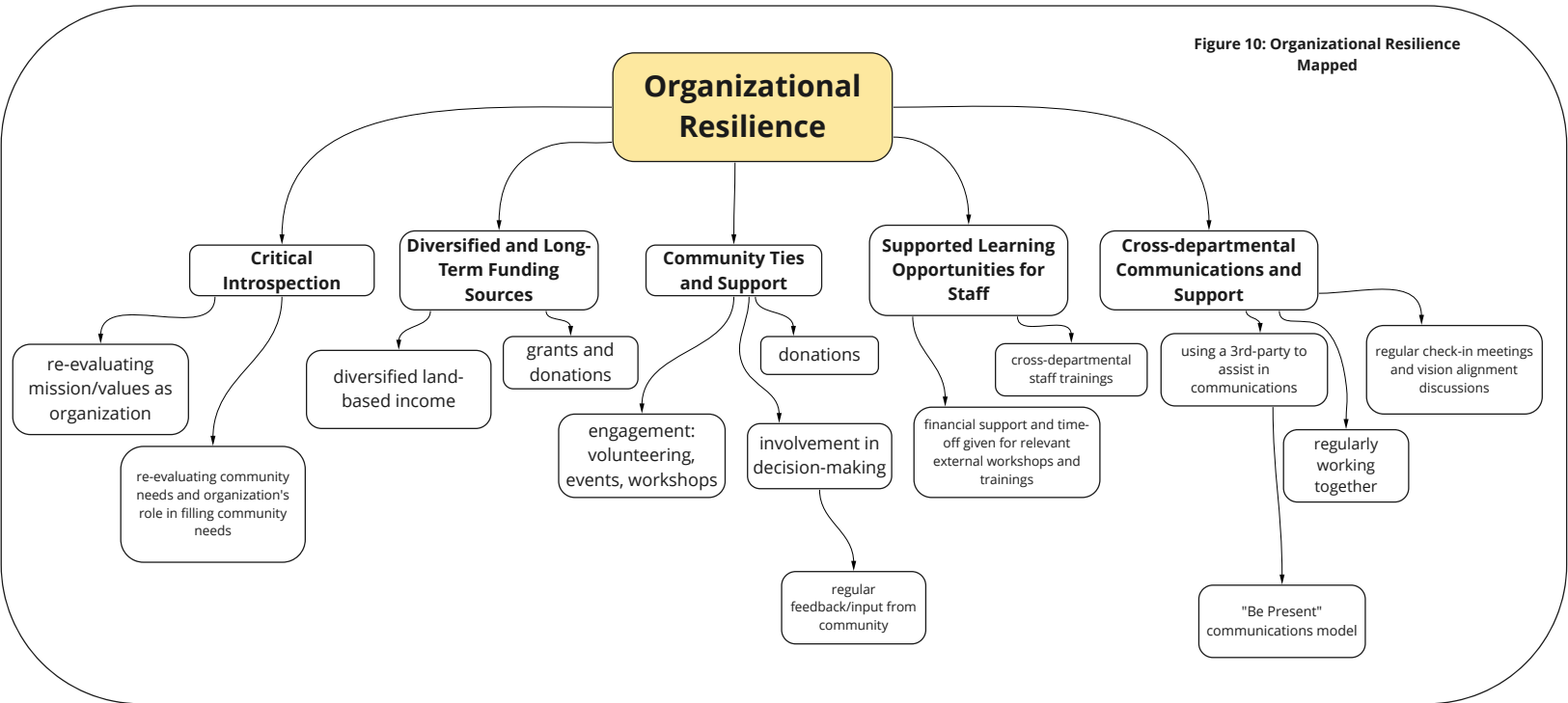


**Last Major Theme:
Organizational Resilience**

Sub-themes found:

- Critical Introspection
- Diverse and Long-term Funding Sources
- Community Ties and Support
- Supported Learning Opportunities for Staff
- Cross-Departmental Communications and Support

Figure 10: Organizational Resilience Mapped



**Reflection Questions
for You...**

What are the ways
yours
organization
keeps itself
resilient against
challenges?

Do some of the
methods listed in
Figure 10 resonate
with how your
organization
operates?

Are there any
methods listed in
Figure 10 you think
your organization
would benefit from
doing more of?

RQ1: How do organizations balance food production with having pedagogical activities?

Takeaways:
You can do both!

Some organizations find doing both difficult while some organizations, particularly those producing at a relatively large scale of production, find providing education activities and producing food "go hand in hand."

What helps the "balance?"
Sufficient staff, space, and time allotted for *both* farming and education! Long-term, service-based learning opportunities like internships and apprenticeships.

RQ2: How are farm-based education programs connecting to broader sustainable and ethical food system transformations in their respective regions?

Takeaways:

Agroecology, food justice and sovereignty, and popular education can be helpful concepts in answering this question!

Organizations are connecting to food system transformations in a variety of ways including: agroecological farming practices, relationships to land and land management strategies; increasing access to their land, food, and programming; building up regional social movements*; and incorporating horizontalism*, wisdom dialogues*, practical and political skill-building*, and creative expression into their pedagogical approaches.

Organizations across a variety of locations, farm production scales, education programming types, and organizational goals are incorporating are connecting to food system transformations. Organizations which explicitly include social justice, food justice, and/or food sovereignty in their mission statements demonstrated more transformative actions than those which did not.

RQ3: What are common challenges farm-based education organizations face and how are they building organizational resilience?

Common challenges for farm-based education programs include: getting people to the farm space, balancing a variety of activities, finding and keeping appropriate and competent staff, communicating effectively internally and externally, securing long-term funding, and systemic or large-scale disturbances.

Farm-based education programs are building organizational resilience through: critical introspection, diverse and long-term funding sources, strong community ties and support, providing supported learning opportunities for staff, and strong cross-departmental communications and support.

Thank you for taking the time to read through this document! Please look out for the full thesis coming soon.

Thank you to the Farm-Based Education Network (FBEN) for supporting this research and offering the opportunity to reach your fantastic network of farm-based educators.

Thank you to the Regenerative Ag Idea Network (REGAIN) for offering your network to share this research.

Again, if you would like to support this research, offering answers to the reflection questions is a huge help! Please reach out by e-mail:

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