



Faculty of Design

2020

Co-Designing Food Revolution for Social Change

Chung-Shin, Yunsun and Mehri, Shrin

Suggested citation:

Chung-Shin, Yunsun and Mehri, Shrin (2020) Co-Designing Food Revolution for Social Change. In: Proceedings of Relating Systems Thinking and Design (RSD9) 2020 Symposium., 9-17 Oct 2020, Ahmedabad, India. Available at <http://openresearch.ocadu.ca/id/eprint/3647/>

Open Research is a publicly accessible, curated repository for the preservation and dissemination of scholarly and creative output of the OCAD University community. Material in Open Research is open access and made available via the consent of the author and/or rights holder on a non-exclusive basis.

The OCAD University Library is committed to accessibility as outlined in the [Ontario Human Rights Code](#) and the [Accessibility for Ontarians with Disabilities Act \(AODA\)](#) and is working to improve accessibility of the Open Research Repository collection. If you require an accessible version of a repository item contact us at repository@ocadu.ca.

Co-Designing A Pathway Through Food Revolution For Social Change: ME=WE Pathway and KULNA Community Garden

Yunsun Chung-Shin¹, Rabab AlHaddad²

¹ College of Arts and Creative Enterprises at Zayed University, Dubai, UAE

² Senior Graphic Designer at World Trade Center, Dubai, UAE

ABSTRACT

Enabling students to become changemakers and integrating sustainability as lifestyle in higher education is a priority. It requires a safe space where students can experience their journey within a healthy environment, which can fill a gap in theory and practice and connect them with nature, society and self. Visualizing the relationship of ME and WE, and a pathway for changemakers has been developing from previous action researches (Chung 2015 and 2018) presented in RSD5 and RSD7. This study proposes a visualized relationship between ME and WE to support changemakers' pathway and showcases its experimental application through a project, *Co-Designing Food Revolution for Social Change* action research team at Zayed University in the UAE. It further explores a ME=WE framework, changemaker pathway and systemic pathway through co-designing a small scale food system in the immersive learning environment, the garden. A narrative of the concept development and the project pathway was visualized in the gigamap presented in RSD9. This paper discusses the findings and reflection on a ME=WE pathway unfolded with the KULNA project. The intention is to share the learning outcomes of the co-designing pathway for KULNA community garden project and the process of prototyping a future scenario.

Keywords: Changemakers; ME=WE Framework; ME=WE Pathway; Co-Design; Food System; Transdisciplinary; Permaculture; Social Enterprise; Social Innovation.

INTRO

With a shifting paradigm in the role of design from user-centered design to co-designing with users supports a people-centered and research-led approach¹ to engage students to changemaker actions. This approach required a level of detachment from expert-mindset with many labels. It led to exploring the wealth of collective visions with everyone's contribution and integrating design thinking and systems thinking in a transdisciplinary team. We investigated visualizing the ME=WE relationships and pathways. We strived to increase empathetic understanding of all actors' needs and perspectives, which was a fertile ground to envision all elements for food system change and to visualize them as a map. By reflecting 4 years of interventions, this paper presents 1) **A Proposed Conceptualization** of a ME=WE framework, changemaker pathway and systemic pathway to support building changemakers' capacities, 2) **A Co-Designing Story** unfolded on the collective pathway of KULNA community garden co-created. The concept was to capture a perpetual growth of ME=WE relationships and the story was mapped as actions were implemented. Building a community garden was instrumental to co-design prototypes of a small scale food system and to co-create a collective pathway on which the team promoted sustainable living towards a transformative change.

¹ Sanders, L. (2008). An evolving map of design practice and design research. *interactions*, 15(6), 13-17.

THE GIGAMAP

The Gigamap presents a process of the concept and application development of a changemaker pathway. It attempted to showcase the framework integration with a pathway and to capture a visual narrative of the research process. With these supporting ideas/theories of Möbius Strip, Panarchy, Two Moral Purpose, Permaculture Principles, and Theory U, the ME=WE Framework concept was developed. The framework and pathway are in early stages of visualizing a process of 'individual capacity building' leading to 'collective capacities' on a path of service towards positive social change. The map structured in 5 sections;

- A. **PROPOSING ME=WE FRAMEWORK DEVELOPMENT**
- B. **SUPPORTING IDEAS/THEORIES TO ME=WE FRAMEWORK + PATHWAY**
- C. **EXPLORING ME=WE PATHWAY DEVELOPMENT**
- D. **ACTION RESEARCH PATHWAY**
- E. **FUTURE SCENARIO**

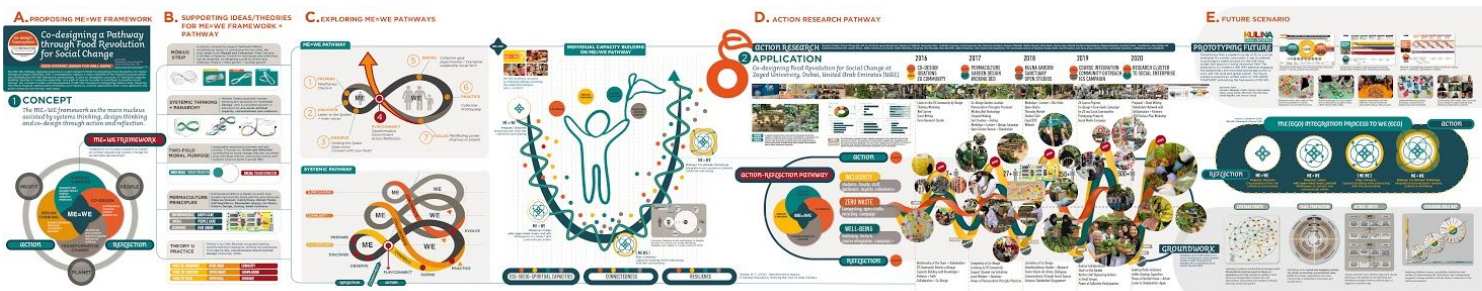


Figure 1.A Gigamap: Co-Designing A Pathway Through Food Revolution for Social Change
<https://rdsymposium.org/2020/10/co-designing-a-pathway-through-food-revolution-for-social-chang>

A. PROPOSING ME=WE FRAMEWORK DEVELOPMENT

The ME=WE framework attempts to understand the symbiotic relationship between ME (self) and WE (society) as they mutually affect their transformative change. Anyone can engage in a transformative journey by connecting their passions to a cause in paths of service.

a. ME=WE FRAMEWORK STRUCTURE PROPOSING

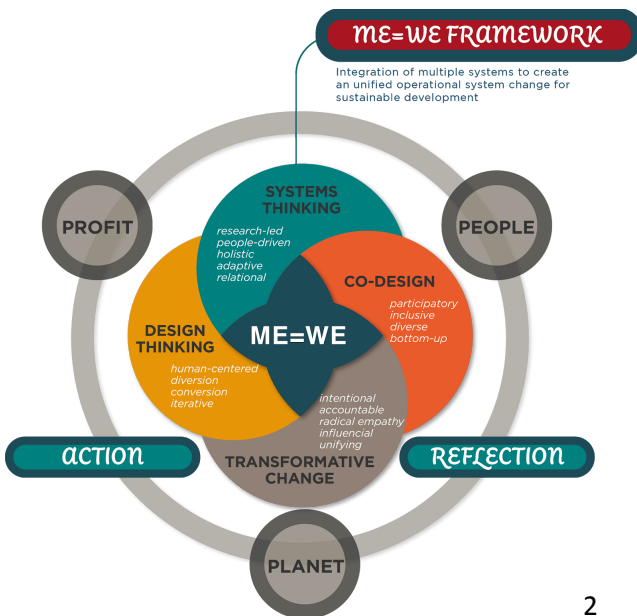


Figure 2: ME=WE Framework Structure

The framework attempts to envision a unified structure by integrating key components: **a) Co-Design** is participatory and inclusive. It invites all actors to actively participate, takes ownership of actions and facilitates a unified vision. **b) Design Thinking** with human-centered approaches is to find solutions for the needs and innovation, which lead to exercising empathy and considering how other parts of the whole are related to each other. **c) Systems Thinking** broadens perspectives and ecosystems

through insightful understanding of relationships among all actors and validates assumptions. **d) Transformative Change** occurs through individual and collective experiences while walking on the path of service for others. **e) People-Planet-Profit** sets criteria for ME=WE integrative solutions that can benefit actors, nature and commonwealth. **f) Action-Reflection** requiring patience, resilience, and faith to move through a pathway.

B. SUPPORTING IDEAS/THEORIES TO ME=WE FRAMEWORK + PATHWAY

a. MÖBIUS STRIP INSIGHT

Inspired by the theories of August Ferdinand Möbius, the Möbius strip was used to visualize a ME=WE relationship by flipping and connecting the two sides enabling a perpetual pathway. When the width of the strip is divided (symbolizing as acts of services), a systemic growth for all can be observed in an expanded strip. A second strip generated by cutting through (symbolizing actions and reflections) can be translated as the ME=WE symbiotic relationship in terms of expansion and growth.

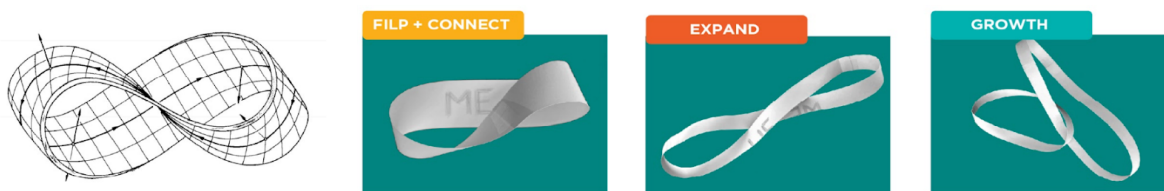


Figure 3: Experiencing Flip/Connect + Expand + Growth

b. SYSTEMIC THINKING + PANARCHY

Michele Tanaka explored ‘system thinking and panarchy for Curricula Change’ with consistent growth in education, *Transformative Inquiry in Teacher Education: Evoking the soul of what matters* (Tanaka 2015). Three-dimensional panarchy model shows the relationship among eco-socio-spiritual capacity, connectedness, and resilience within adaptive systems (Holling, 2001). According to Tanaka, a student learns and moves clockwise through this model from growth to conservation, he or she makes more connections, increasing the complexity of their knowledge.

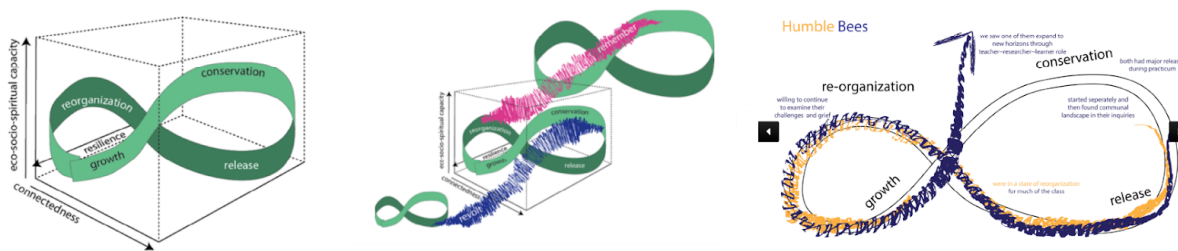


Figure 4: Adaptive Cycle for Capacity Building

c. TWO-FOLD MORAL PURPOSE

Inseparable relationship between self and society, it focuses on contributing to social change that one can affect at an individual (micro), community (meso) and systemic (macro) levels in community building process while eliminating prejudice and building peace (Lampel 1991). It is aligned with social action principles of the Bahá'í faith; to develop one's inherent potentialities and to contribute

to the transformation of society are indivisible.

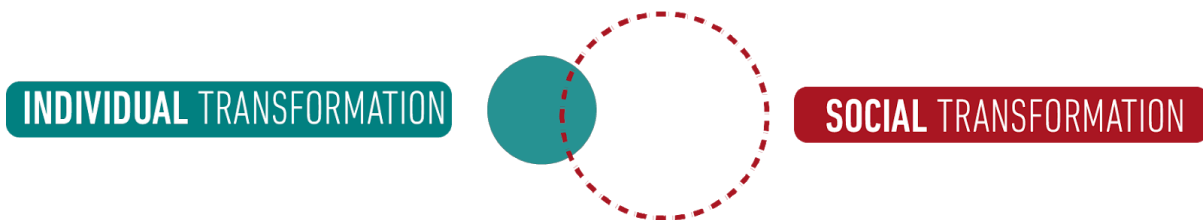


Figure 5: Inseparable Individual and Social Transformation

d. PERMACULTURE PRINCIPLES

Permaculture ethics is based on the environmental, social and economic principles of earth care, people care and fair share. Learning from nature, it encourages these practices: observe/interact, catch/store, obtain yields, self regulation, renewable energy, no waste/recycle/reuse, pattern design, zoning and small solutions. Nature becomes a great teacher showing a pathway to build a healthy regenerative relationship of ME=WE through science, humanity, and divine laws .

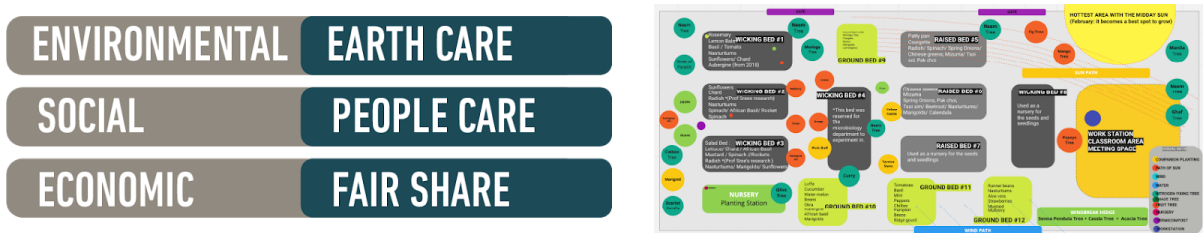


Figure 6: Applying Permaculture Principles to build KULNA

e. THEORY U PRACTICE

A journey of changemaker in Theory U is aligned with ME=WE. Otto Scharmer proposed leading **transformational change** by shifting the awareness from ego to eco, consciousness-based systems change. Transforming the voice of judgment, cynicism, and fear to the practice of open mind-heart-will with curiosity, compassion and courage by bending a beam of observation to self is a foundation of building changemaker’s capacities (Scharmer 2018).

“As the U shape diagram illustrates, we move down one side of the U (connecting us to the world that is outside of our institutional bubble) to the bottom of the U (connecting us to the world that emerges from within) and up the other side of the U (bringing forth the new into the world). On that journey, at the bottom of the U, lies an inner gate that requires us to drop everything that isn’t essential. This process of letting go (of our old ego) and letting come (our highest future possibility: our Self) establishes a subtle connection to a deeper source of knowing. The essence of presencing is that these two selves—our current self and our best future Self—meet at the bottom of the U and begin to listen and resonate with each other. Once a group crosses this threshold, nothing remains the same. Individual members and the group as a whole begin to operate with a heightened level of energy and sense of future possibility. Often they then begin to function as an intentional vehicle for an emerging future.”²



Figure 7: Transformative Journey in Theory of U

² Scharmer, C. O. (2009). *Theory U: Learning from the future as it emerges*. Berrett-Koehler Publishers.

C. EXPLORING ME=WE PATHWAY DEVELOPMENT

A changemaker pathway can be seen as a hero's journey (Campbell 1949) where the hero must die and be reborn to face one's fear (challenge). Our systems need protagonists, collective leaders³ who can collectively bring changes to our own local community, then connect and influence global communities. A pathway can be versatile, evolving and impactful which cultivate capacities for social innovation. While individual capacities are enhanced, a collective pathway is also advancing towards social change in a multi-layered systemic pathway. One of the functions of the pathway enables connection, collaboration, and contribution.

a. ME=WE CHANGEMAKER PATHWAY

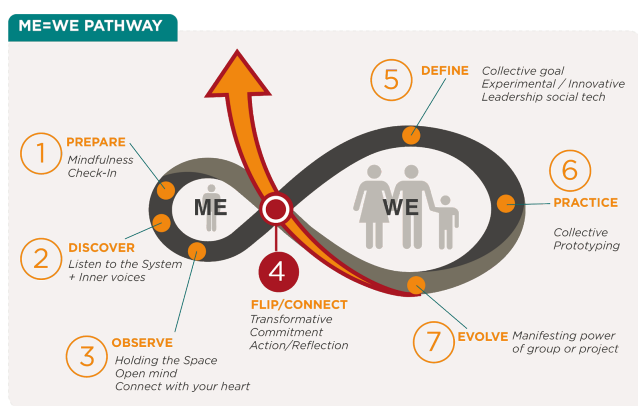


Figure 8: ME=WE Changemaker Pathway

A changemaker pathway starts by identifying their passion, purpose, and commitment to follow through a service journey with actions and reflections. Individual's capacities grow and develop as they experience flipping/connecting tipping points and working with community described in figure 8, which is a guiding light: 1) **PREPARE** (mindful check-in), 2) **DISCOVER** (listening to the system

including self), 3) **OBSERVE** (holding space with an open mind-heart-will), 4) **FLIP/CONNECT** (commitment with empathy and curiosity), 5) **DEFINE** (unified vision and collective leadership), 6) **PRACTICE** (building and testing prototypes), 7) **EVOLVE** (reflect, learn and move forward).

b. ME=WE SYSTEMIC PATHWAY

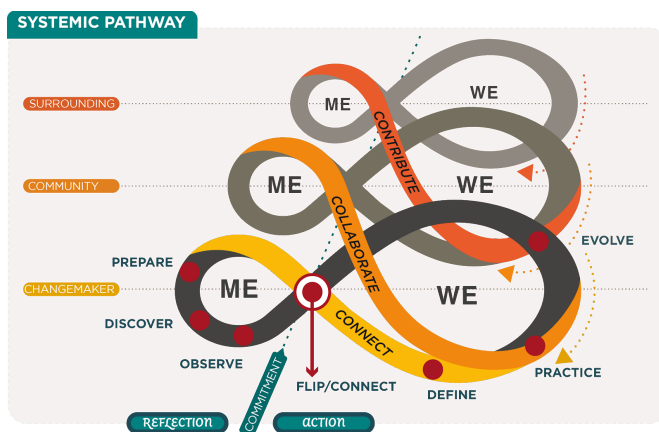


Figure 9: ME=WE Systemic Pathway

The path extended version of the above in continuous cycles. Perpetuated growth allows one to ascend to the next cycle that of which WE grows larger due to ripple effect. First step is to connect with the community and be a part of it. Second, to collaborate with the community to initiate new ideas. Third, contribution happens on a bigger scale and type of

³<https://socialinnovationsjournal.org/editions/issue-52/75-disruptive-innovations/2908-let-s-bust-the-lone-hero-myth-the-role-of-collective-leadership-in-systems-change>

engagement differs. Understanding these relationships has a direct connection to education, where that gap requires vertical literacy (Scharmer 2012).

“This must be considered when leading transformational change by shifting the awareness from ego to eco, and to a consciousness-based systems change. This needs to be cultivated across all levels: at the level of individuals (holding the space for self-awareness), groups (deep listening and dialogue), organizations (from centralized to ecosystems), and in the evolution of larger systems (by seeing the whole). All these dimensions are at play whenever you deal with transformational change in society” – by Otto Scharmer in Theory U.

c. PRACTICE VISUALIZING ME=WE RELATIONSHIP

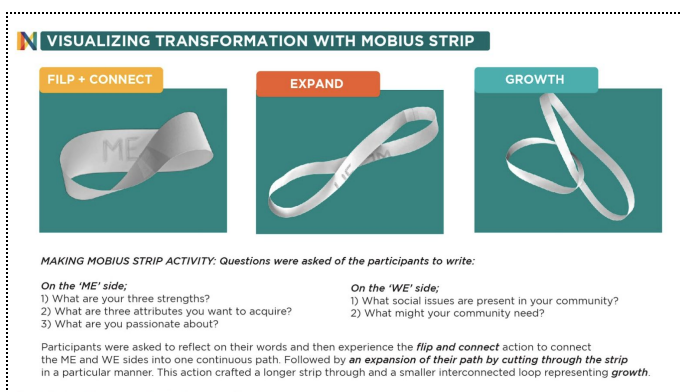


Figure 10: Visualizing Transformation with Mobius Strip

Often this path can start with a ME=WE workshop, visualizing the relationship by a hands-on activity. Participants make a Möbius strip by connecting ME and WE, and are conducted among the team and students in design courses.

Example: The team pondered the relationship of a personal transformation leading to societal change while working with the community of food production and sustainability in the campus. The workshop was instrumental to communicate the vision of the project as co-designing food activities while building the capacities of changemakers. Activities were designed around topics like nutrition, health, food waste, social media and circular economies and were open to students, faculty, gardeners, staff, and community volunteers. This was a rare change for ZU female students to directly interact with them on garden tasks, games, and food sharing.



e. **INDIVIDUAL CAPACITY BUILDING ON ME=WE PATHWAY**

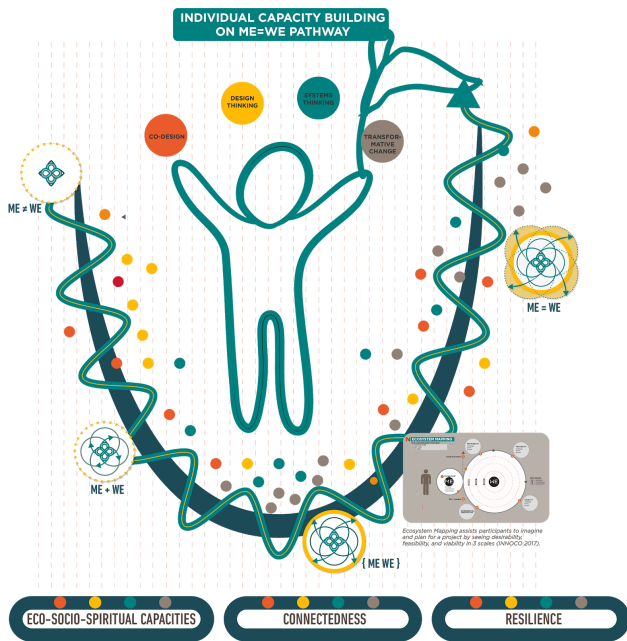


Figure 11: Individual Capacity Building on Me=We Pathway

Visualizing a changemaker pathway aims to support building capacities of leadership (Senge 2015) and can be seen on multiple levels. Capacity building is an interactive and experiential process fueled by meaningful services rendered with team(s) integrating design thinking, systems thinking, co-design towards transformative change. It is an iterative and non-linear process supported by various inspiring hands-on activities including a ME=WE workshop, Ecosystem Mapping, and/or modified LEGO Serious Play. The healthy pathway can be associated with growing capacities of eco-socio- spiritual capacities, connectedness,

and resilience. This is aligned with experiencing the ‘**ME INTEGRATION PROCESS TO WE**’, which is shown in figure 12.

f. **REFLECTING ON ME (EGO) INTEGRATION PROCESS TO WE (ECO)**

Any path will be unique and has its own explorative learning and growth. It’s notable that a common pattern can be found in “**ME (EGO-based) INTEGRATION PROCESS TO WE (ECOsystem-based)**” which can assist for a constructive path development with the four stages of **ME ≠ WE**, **ME + WE**, **{ ME WE }**, and **ME=WE**. These visual icons inspired by the ME=WE framework elements are designed to describe each stage of capacity growth using infinity loop, perpetual growth, capacity expansion, cycles (one cycle ends for another to begin). Four circles represent design thinking, systems thinking, co-design, and transformative change, and arrows signifies ‘growth’ stemming from the core value of ME=WE. The yellow circle indicates a boundary created by self-limiting attributes, and dissolves as growth is happening.

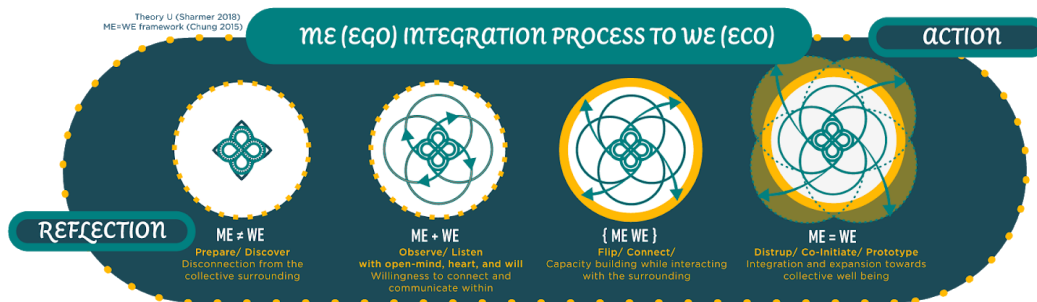


Figure 12: ME (EGO-based) INTEGRATION PROCESS TO WE (ECOsystem-based)

This integration process is envisioned in the following steps:

	<p>ME ≠ WE Observe system disconnect: Willingness to acknowledge current status of disconnectedness from nature, society, and self. It is an opportunity to question outwardly-looking perspectives and pay attention to individual capacities inwardly, which provides new insights. This is a gateway to humbly start a changemaker's journey.</p>
	<p>ME + WE Listen to the system to open-mind, open-heart, and open-will: A humble posture of learning and willingness to listen and lead to connecting and communicating with the system along with a team. It offers new energy, perspectives and ideas to move forwards building trust from the ground-up.</p>
	<p>{ ME WE } Flip and Connect while interacting with the surrounding: Personal or collective commitments to a journey, which requires the 'letting-go' of ego-based old paradigms and practices, and then welcoming the 'letting-come' new ideas, insights, and behaviors towards social change.</p>
	<p>ME=WE Disrupt an old system through co-sensing and co-initiating: Co-designing prototypes of new ideas and behaviors for disrupting old ways and integrating new elements towards collective well-being and sustainable growth. The goal is to test prototypes and more forward while building individual and collective capacities as changemakers.</p>

These 4 steps above indicate for developing the capacities of individuals and collectives, which can occur at any moment and time, and be repeated in the pathway.

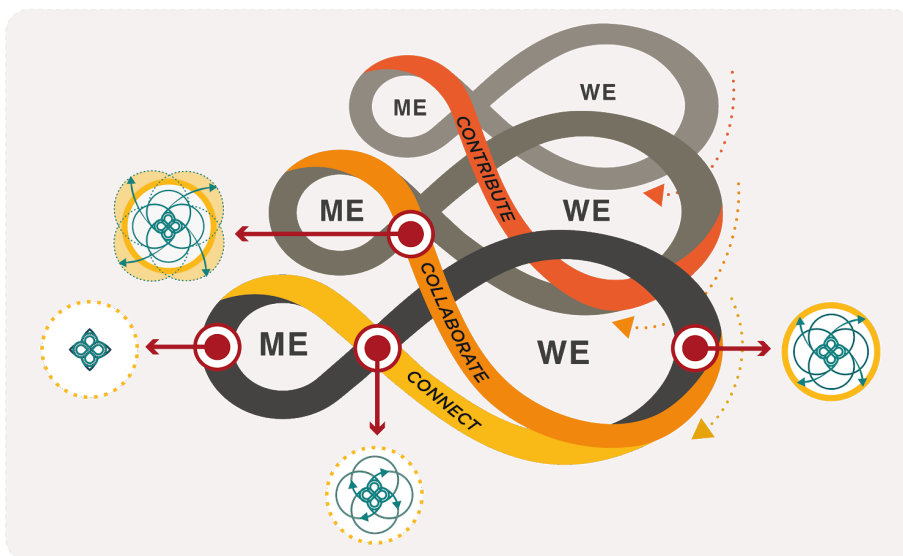


Figure 13: ME=WE Pathway integration with Theory U

D. APPLICATION: ACTION RESEARCH

BACKGROUND: Food challenges are at the core of safeguarding the earth and humanity as it concerns and impacts everyone. Current global endeavors to face the environmental challenges are calling all of us to participate in a system change starting from a local scale. The KULNA (means ‘*All of Us*’ in Arabic) Community Garden was first conceptualized at the ZU Innovation Week 2016 during a Design Thinking workshop, where students voiced a strong interest in sustainability and food production. An action research was then launched under a research cluster. The KULNA experienced a ME=WE framework and pathway in multi levels of individuals, teams, and surroundings. The focus was on a transformative process fueled by ‘actions and reflections’ around food activities co-designed by the cluster, focus group and collaborators.

PROCESS: The first step was building a KULNA Community Garden. The purpose was to engage people in the process by creating a physical sanctuary to grow produce based on the permaculture principles. The second was establishing KULNA as a social laboratory that could identify the challenges and solutions around **inclusivity, zero-waste, and well-being**. The final step was co-designing activities that can communicate the vision to multiple stakeholders and consolidate diverse opinions among the growing participants while delivering a working prototype of a small scale food system at ZU and seeking the next phase to create values to the wider communities. The figure 14 demonstrates how the cluster envisioned a ME=WE pathway for the project.



Figure 14. Co-Designing a ME=WE Pathway of the research cluster

IMPLEMENTATION: The KULNA garden became an active learning space for students and faculty for hands-on, interactive skills-building. We offered educational activities to raise awareness about sustainable food systems and to promote healthier lifestyles. Workshops included a wide range of topics such as permaculture, composting, compost tea, urban farming, dry land, seed-to-table food systems, healthy eating and food consumption. We paid attention to the quality of organic seeds; transformed food waste into nutrient rich compost which was used for growing vegetables, herbs

and flowers; conserved water with wicking bed technology to stimulate underground water sources.

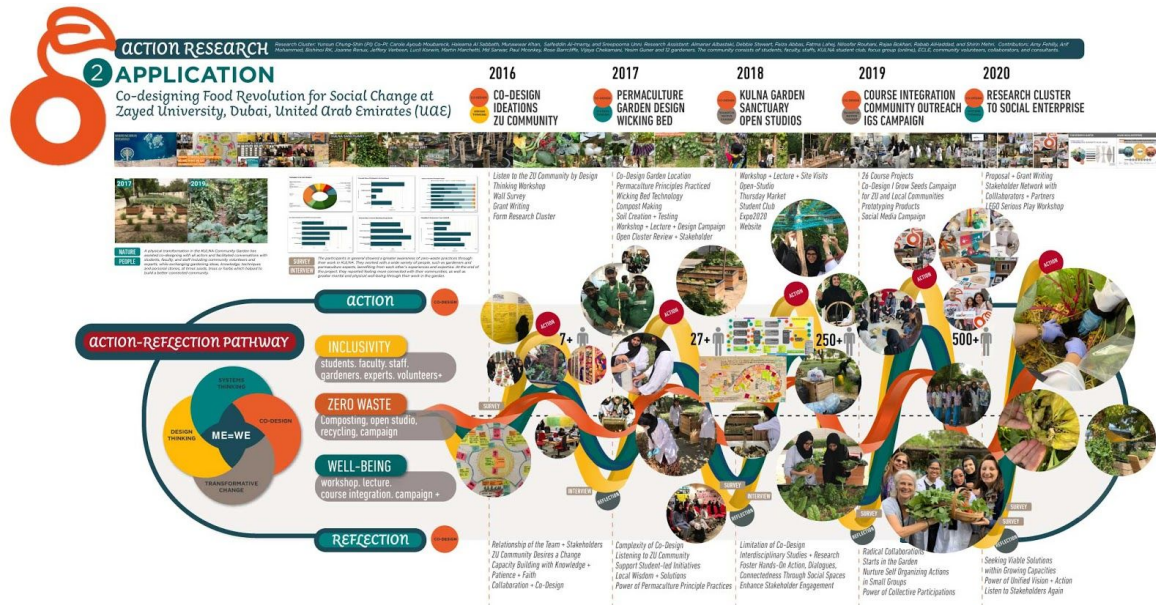

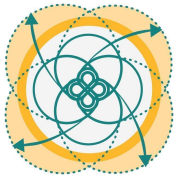


Figure 15: Action Research Pathway on Inclusivity, Zero Waste, and Well-Being

ACTION + REFLECTION ON THE KULNA ME=WE PATHWAY : The table below summarizes ‘action and reflection’ on each step of the collective pathway working with a wide range of stakeholders.

ME WE SYMBOLS	INCLUSIVITY / ZERO WASTE / WELL BEING	ACTION(A) / REFLECTION(R)
<p>ME ≠ WE Prepare + Discover</p>	<p>Conducted a campus-wide design thinking workshop, <i>WE ARE WHAT WE EAT</i> which recognized disconnectedness from nature, the ZU community and healthy lifestyles. Action research on a Food Revolution was initiated. Collected data on the gap of knowledge and practices at ZU. The intention was to create a community garden as a prototype.</p>	<p>(A) <i>Listen to the ZU Community by Design Thinking Workshop/ Wall Survey/ Grant Writing / Form Research Cluster</i></p> <p>(R) <i>Relationship of the Team + Stakeholders ZU Community Desires a Change Capacity Building with Knowledge + Patience + Faith Collaboration + Co-Design</i></p>
<p>ME + WE Observe + Listen</p>	<p>We observed other universities’ food systems and solutions; local and regional food initiatives, and permaculture approaches. We started building a community garden inviting stakeholders: students, staff, faculty, and gardeners to co-design a small scale food system based on the permaculture principles. Using the ME=WE framework integrating 4 aspects, we co-designed community garden activities.</p>	<p>(A) <i>Co-Design Garden Location / Permaculture Principles Practiced / Wicking Bed Technology / Compost Making / Soil Creation + Testing / Workshop + Lecture + Design Campaign / Open Cluster Review + Stakeholder</i></p> <p>(R) <i>Complexity of Co-Design Listening to ZU Community Support Student-led Initiatives Local Wisdom + Solutions Power of Permaculture Principle Practices</i></p>

 <p>{ ME WE } Flip + Connect</p>	<p>With growing commitments towards social change, we attempted to collaborate with faculty, experts, and volunteers through course integrations, student-led EXPO2020 engagement, lectures and workshops open to the public, community outreach with the ‘I Grow Seeds Campaign’ and radical collaborations with more stakeholders locally and internationally.</p>	<p>(A) <i>Workshop + Lecture + Site Visits/ Open-Studio / Thursday Market / KULNA Student Club / Expo2020 / Website</i></p> <p>(R) <i>Limitation of Co-Design Interdisciplinary Studies + Research Foster Hands-On Action, Dialogues, Connectedness Through Social Spaces Enhance Stakeholder Engagement</i></p>
 <p>ME = WE Disrupt + Co-Initiate + Prototype</p>	<p>Transitioning from a research cluster at ZU to a social enterprise for a wider community, it was an attempt to prototype a viable solution for the UAE food system and beyond in the social innovation field. We proposed KULNA Social Enterprise, in transition to the next cycle. The proposal to ZU marked a {ME =WE} pathway engaging the stakeholders and maximizing leverage points to work with the local and global system. The future scenarios project an unified vision of “WE GROW TOGETHER” embodying the framework of ME=WE.</p>	<p>(A) <i>26 Course Projects / Co-Design I Grow Seeds Campaign for ZU and Local Communities / Prototyping Products / Social Media Campaign / Proposal + Grant Writing / Stakeholder Networking for Collaborators + Partners / LEGO Serious Play</i></p> <p>(R) <i>Radical Collaborations Nurture Self Organizing Actions in Groups Power of Collective Participations Seeking Viable Solutions Power of Unified Vision + Action Listen to Stakeholders Again</i></p>

E. FUTURE SCENARIO

ASPIRATION: A committed team ventured to model social enterprise to help sustain KULNA efforts and lead social change in the food system. The goal is to generate sufficient profit and contribute to the security of the planet for people’s well-being by **1) building a Food Forest**, a unique outdoor classroom environment within our native desert climate where the community can learn about sustainability and social change in the region through hands-on, experiential learning, **2) offering a Changemaker Program**, a transdisciplinary community learning space so community members can become changemakers while prototyping their ideas around sustainability through mentorship and small grants, and **3) collaborating** with academic, business, government and community partners to scale up this model in wider communities. To realize this plan, it required a transition from a cluster to a social enterprise for a wider community with support from ZU. The proposal submitted to ZU marked a {ME WE} pathway engaging the stakeholders and maximizing leverage points to work with the local and global system. This future scenario projects an unified vision of building a sustainable food system and embodies implementing the framework of ME=WE. Visualizing KULNA Social Enterprise structure, products, service, team, stakeholders and philosophy (Figure 16).

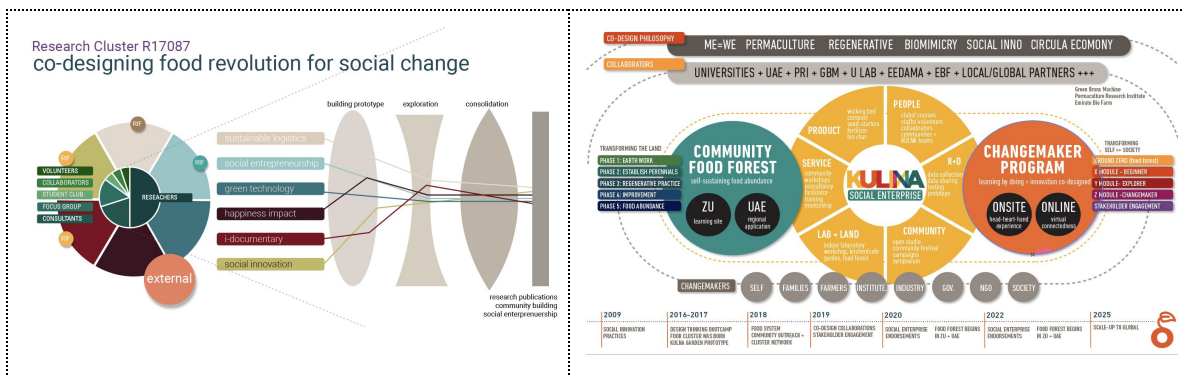


Figure 16. Food Revolution for Social Change Research Cluster to KULNA Social Enterprise

GROUNDWORK: Validation and confirmation for a future development using Systemic Design Toolkit developed by Namahn and consultation by Dr. Kristel Van Ael 2020. **1) Leverage Points:** By listening to systems through interviews and surveys, leverage points were identified; Permaculture practices based on hands-on experience potentially leading to building a food forest and changemaker program for next interventions. Discovering inter-relations between elements of the food system. **2) Value Proposition:** Identifying some honest and engaging ecological, social, economical, and emotional value points for people, organization & society concurrently in individual, community, and society levels. **3) Actor's Inputs:** Using a systemic user research approach, closely listening to the people by summarizing and identifying variables that are influencing in a negative or positive way. **4) Expansion Road Map:** Exploring different venues, possibilities, institutions and entities of implementing the 'food forest' and 'changemaker programs' closely related to KULNA vision to intervene in the system and expand.

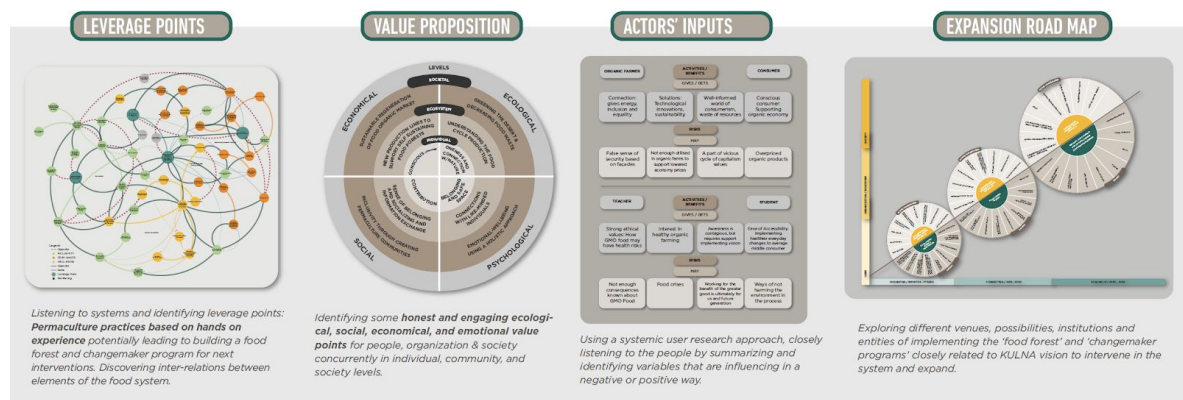


Figure 17. Ground Work Using Systemic Design Toolkit

CO-DESIGNING: In order to propose new social enterprise solutions, reading the reality and listening to the system was a high priority. Through LEGO Serious Play, design thinking, and systemic design toolkit workshops (Figure 18) and zoom discussions with potential collaborators, building a food forest and changemaker program took shape as a guiding light to envision ME=WE pathway for the future stories unfolding. The business proposal requesting an endorsement and partnership was submitted to ZU in July 2020 along with the main project timelines (Figure 18).



Figure 18. Co-Designing Efforts for KUNA Social Enterprise Future Scenario

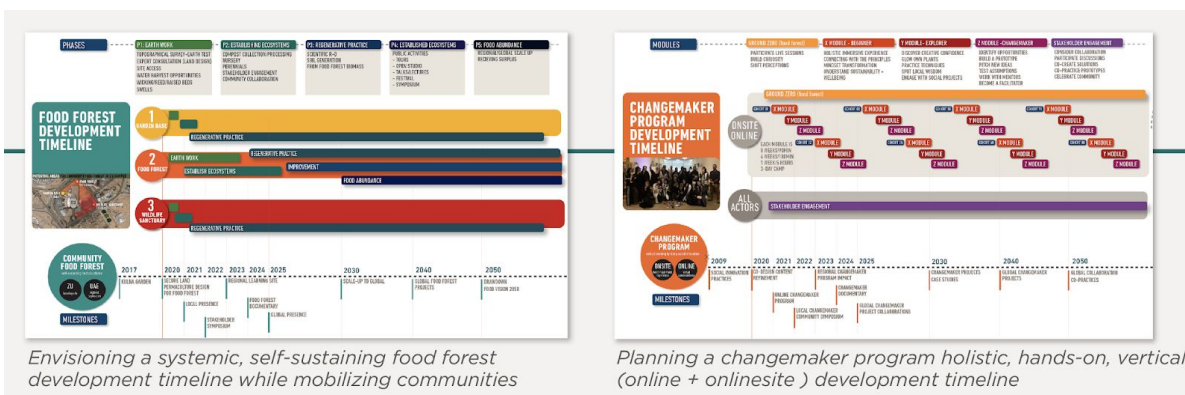


Figure 19. Envisioning Food Forest and Changemaker Program Timeline

DISCUSSION ON CAPACITY BUILDING

How do changemakers embody the ME=WE framework and pathway in terms of building capacities for self growth leading to social change? The true impact of co-designing the food revolution using the framework of ME=WE in individuals, teams, and community levels is still unknown as the seeds of sustainable living and transformative change are dormant. Unlike other social innovation programs, the team was able to generate ideas and build prototypes without having formal training. It’s interesting to find that changemakers’ capacities were naturally activated by implementing tasks. A survey about ME=WE relationship and capacity building has been shared with 11 people of the cluster and KULNA team members that has been intimately engaged in 4 years of co-designing solutions. The overall result and answers have been positive on the framework/pathway and a few insights from the survey in these 3 key areas.

CONNECTEDNESS: Connected with **nature** through garden works, with **people** through transdisciplinary teamwork (non-hierarchical structure), with **self** through facing challenges. Participants’ connectedness with nature, people, self has shown that from a linear scale of ‘Rarely to Strongly connected’, none of the respondents chose rarely and **100% of the participants chose strongly connected**. The power of a diverse interdisciplinary team was expressed by one participant saying, “It was an **excellent chance** for both students and faculty to team up with colleagues from various colleges to **collaborate** to work on the transdisciplinary project.”

RELATIONSHIPS: The team expressed that the project helped to deepen their (ME) relationship with team-community-society (WE) while their understanding of ecology, society, and spirituality has enhanced with varying degrees; from a linear scale of ‘Rarely to Strongly connected to WE’, none of the

respondents chose rarely and **100% of the participants chose connected to strongly connected**. This demonstrated while working for a common social good helps bring people together, build stronger relationships, and maybe ease an idea of competitiveness among others and more observant towards the self. When the self grows, so does the collective grow. Everyone's personal journey of growth differs. Participants were asked to choose what they need personally to make their pathway progress towards ME=WE integration; **9.1%** chose '**Knowledge about ecology, society, and spirituality**' to enhance your capacities'. **18.2%** chose '**Connectedness with nature, society, and self**'. **27.3%** chose Resiliency to face challenges. **45.5%** chose '**Projects to practice with others**'. It shows their aspiration to serve the community with strong readiness. The results show that the '**team interaction and collaborative efforts**' are the highest % for growth to the majority of the respondents. As they too themselves have gone through KULNA journey and experienced it firsthand.

CONFIDENCE: *"That no project is unachievable. Even trying to grow a jungle in the desert is possible given the right mindset. It is all about people, nature already knows what to do."* Participants were asked to rate what current stage they are on the ME=WE pathway. As this was a personal journey to each, there is a variance degree of answers. **36.4% found themselves to be in the second stage** of ME + WE: Listen to the system and each other with open-mind, heart, and willingness to connect and communicate within the system. **18.2% responded to be on the third stage** of { ME WE }: Flip + Connect to build capacity while interacting with surroundings. While **45.5% has consciously reached the fourth stage** ME=WE phase as changemakers. 100% of the participants answered 'Yes' to KULNA Project impacting their personal growth. A common theme was expanding the learning capacity, collaboration in a research setting and in exchange of knowledge. Through intensive service activities and reflections, these experiences have enriched individual growth and broaden understanding of collective well-being. A notable response below: *"Through networking and observing colleagues and team members, I learnt new things, interacted with different types of people, and was inspired by new ideas and values. My self confidence improved through an increased belief in my own abilities and I found fulfilment and satisfaction through my interdisciplinary work in the garden. By improving my communication and interpersonal skills, it made me better at problem-solving, listening and being adaptable."*

FINDINGS ON THE KULNA PROJECT

Understanding the application, the garden project, the following data collected from X the broader KULNA community including focus group and volunteers was analyzed. The participants in general showed a greater awareness of zero-waste practices through their work in KULNA. They worked with a wide variety of people, such as gardeners and permaculture experts, benefiting from each other's experiences and expertise. At the end of the project, they reported feeling more connected with their communities, as well as greater mental and physical well-being through their work in the garden. It's also recognized that a physical transformation of the garden has assisted co-designing with all actors and facilitated conversations with students, faculty, and staff including community volunteers and experts. Some findings are encouraging that participants are interested in a healthy lifestyle, food waste issues, and believe that sustainable lifestyle changes are needed in UAE. Others have more questions about systemic approaches on action and reflections.

On inclusivity, although all interviewees believed that co-design and social change are a good thing; understandings of these two terminologies varied. On zero waste, most, if not all, felt they were up to date with the activities of the cluster. The social media platforms (Instagram, WhatsApp and Facebook)

have helped with the sharing of meeting timings, videos, pictures and updates on KULNA. On well-being, a healthy lifestyle is promoted, and by having a garden on-campus, a similar change in mindset can be observed at home. Behavioral change has been observed in students, faculty and staff and external stakeholders that interacted with the project the last four years. The physical garden, often called a sanctuary helped exchanging gardening ideas, knowledge, techniques and personal stories, at times seeds, trees or herbs which helped to build a better connected community. Having a common space and topic was helpful to talk about personal and professional growth as it provided chances to build bonds of friendship and a sense of community to encourage students to lead and faculty to collaborate for meaningful projects and engagements in food system change. During this time, we have repeatedly seen the delicate relationship between food, human life, and social engagement; affecting the core of one's ability to participate in the world we live in.

Henceforth, with the learnings from KULNA, we intend to scale the impact across ZU to create a healthy, inclusive and zero waste- enabling food system. These activities encouraged us to strengthen the essence of co-designing a healthy and sustainable food system, allowing everyone to participate (inclusivity), practice (zero-waste), promote (well-being) and prosper through a sustainable model that can be scaled and rolled out as social enterprise, a community hub for sustainability and social change, which can carry forward implementing a large scale food revolution in the UAE and the region in the future.

CONCLUSION

The KULNA project was introduced to a conventional standard higher education system with a collective pathway, which is nature-based, hands-on, and vertical learning approaches. Though 'co-design' takes time and demands patience to manage a collective path, it was rewarding to witness personal growth connecting communities, acquiring practical knowledge, and a sense of social responsibilities in the team. It was identified that 1) **a ME=WE pathway** can be a strong foundation for building changemaker capacities, engaging learning spaces and cultivating social innovation, 2) **a collective changemaker pathway** is impactful and conducive to nurture individual growth with stronger commitment and confidence 3) **Connectedness** is stronger as the community contributes to building collective knowledge, capacities, and healthy relationships to transform ideas into reality. A few next steps are; **To strengthen** the ME=WE pathway as a future changemaker program with Theory U and other design tools such as LEGO or Paradox Cards to further assist changemakers in various learning spaces. MIT u-lab 2x prototyping exploration has started; **To implement** the KULNA vision as a social enterprise in reality with ZU support and commitments; **To practice** active listening and meaningful dialogues within one's communities for any growth opportunities in classrooms and local community neighborhoods.

As facing unprecedented global challenges as humanity, it's timely and appropriate that we reimagine the roles and capacities of higher education for assisting students' journeys, embracing the needs and readiness of individuals, teams, and surroundings. Increasing collaboration with relevant stakeholders by connecting silos in education and pursuing projects that are empathetic, inclusive, self-organizing, and transformative should be a high priority in order to better support **changemakers' paths**. In that regard, building food forests while offering changemaker programs might not be too far-fetched ideas. This action research project was a good reminder that we are not alone and there are more people, organizations, and initiatives who are willing to co-create healthy, happy, and holistic environments that enable social change when walking on the pathway of service for the betterment of humanity. We hope

our learning can be beneficial to other transdisciplinary teams in higher education and community settings.

"This is the moment when what we need most is enough people with the skill, heart, and wisdom to help us pull ourselves back from the edge of breakdown and onto a different path." — C. Otto Scharmer (*Leading from the Emerging Future: From Ego-System to Eco-System Economies*)

REFERENCE

- Acaroglu, L. (2017) 'Tools for systems thinkers: The 6 fundamental concepts of systems thinking' *Disrupt Design* [online] 7 September.
<https://medium.com/disruptive-design/tools-for-systems-thinkers-the-6-fundamental-concepts-of-systems-thinking-379cdac3dc6a> (Accessed 17 September 2020).
- An overview of social innovation in the Middle East and North Africa: Prepared by Kendra Schreiner and Jordan Junge, SIX May 2018 [online]
https://socialinnovationexchange.org/sites/default/files/uploads/an_overview_of_social_innovation_in_the_middle_east_and_north_africa.pdf (Accessed September 2019)
- Bayuk, K. and Toensmeier, E. (2018) 'A comprehensive plan to reverse climate change: Project Drawdown' *Permaculture Magazine* [online] 9 October.
<https://www.permaculture.co.uk/articles/comprehensive-plan-reverse-climate-change-project-drawdown> (Accessed 17 September 2020).
- Britton, G. (2017) *Co-Design And Social Innovation Connections, Tensions And Opportunities*, 1st ed., Routledge, New York.
- Dickinson's College Farm <https://www.dickinson.edu/farm> [online] (Accessed September 2019).
- Hamilton, H. (2013). Sustainable food lab learning systems for inclusive business models worldwide. *International Food and Agribusiness Management Review*, 16(1030-2016-82964), 33-38.
- Halabi, S., Kheir, S. and Cochrane, P. (2017) *Social enterprise development in the Middle East and North Africa: A qualitative analysis of Lebanon, Jordan, Egypt and Occupied Palestine*. [online]
<https://wamda-prod.s3.amazonaws.com/resource-url/e2981f10ea87448.pdf> (Accessed 17 September 2020).
- Howaldt, J., Kaletka, C., Schröder, A., & Zirngiebl, M. (2018). Atlas of social innovation—New practices for a better future. *TU Dortmund University, Dortmund*.
- Jones, P. (2015) 'Design research methods for systemic design: Perspectives from design education and practice', *Proceedings of the 58th Annual Meeting of the ISSS - 2014 United States*, [online]
<https://journals.iss.org/index.php/proceedings58th/article/view/2353> (Accessed 17 September 2020).
- Kania, J. and Kramer, M. (2011) 'Collective impact'. *Stanford Social Innovation Review*, Vol. 9 No. 1, pp.36-64.
- Kim, M. (2015) 'Rethinking the impact spectrum' Ashoka U [online] 30 April.
<https://ashokau.org/blog/rethinking-the-impact-spectrum/> (Accessed 17 September 2020).

- Kristiansen, P., & Rasmussen, R. (2014). *Building a better business using the Lego serious play method*. John Wiley & Sons.
- Mason, I. G., Brooking, A. K., Oberender, A., Harford, J. M., & Horsley, P. G. (2003). Implementation of a zero waste program at a university campus. *Resources, Conservation and Recycling*, 38(4), 257-269.
- Meadows, D. 'Dancing with systems', *The Donella Meadows Project* [online].
<http://donellameadows.org/archives/dancing-with-systems/> (Accessed 17 September 2020).
- Rahman, R., Fenech, M., Freeman, N., Herbst, K., and Matielo, D. (2018) 'Let's bust the lone hero myth: The role of collective leadership in systems change', *Social Innovations Journal*, Issue 52 [online]
<https://socialinnovationsjournal.org/editions/issue-52/75-disruptive-innovations/2908-let-s-bust-the-lone-hero-myth-the-role-of-collective-leadership-in-systems-change> (Accessed 17 September 2020).
- 'Recap of DoTS #5: Drawdown is possible and absolutely doable', *Presencing Institute* [online] 11 October 2019.
https://www.presencing.org/stories/recap-of-dots-5-drawdown-is-possible-and-absolutely-doable_1576158115 (Accessed 17 September 2020).
- Rizzo, F., Deserti, A., & Cobanli, O. (2018). From social design to design for social innovation: PATTERNS OF SOCIAL INNOVATIONS IN THE MIDDLE EAST & NORTHERN AFRICA by Mohamed A. Wageih / Maha Ashraf Attia / Abdel Hamid Zoheiry
- Stroh, D. P. (2015) *Systems Thinking for Social Change: A Practical Guide to Solving Complex Problems, Avoiding Unintended Consequences, and Achieving Lasting Results*, 2nd ed., Chelsea Green Publishing, Hartford.
- Sanders, E. B. N., and Stappers, P. J. (2008) 'Co-creation and the new landscapes of design', *International Journal of CoCreation in Design and the Arts*, Vol. 4 No. 1, pp.5-18.
- Sanders, L. (2008) 'An evolving map of design practice and design research', *Interactions*, Vol. 15 No. 6, pp.13-17.
- Schwartz, B. (2012). *Rippling: How social entrepreneurs spread innovation throughout the world*. John Wiley & Sons.
- Scharmer, C. O. (2009). *Theory U: Learning from the future as it emerges*. Berrett-Koehler Publishers
economies. Berrett-Koehler Publishers.
- Scharmer, C. O., and Kaufer, K. (2013) *Leading from the Emerging Future: From Ego-System to Eco-System Economies*, 2nd ed., Berrett-Koehler Publishers, San Francisco.
- Senge, P., Hamilton, H., and Kania, J. (2015) 'The dawn of system leadership'. *Stanford Social Innovation Review*, Vol. 13 No. 1, pp.27-33.
- 'Sector summary: Food, agriculture, and land use', *Project Drawdown* [online].
<https://drawdown.org/sectors/food-agriculture-land-use> (Accessed 17 September 2020).
- Systemic Design Toolkit. [online] <https://www.systemicdesigntoolkit.org/> (Accessed 20 November 2018).
- The Drawdown Project and Permaculture: [online] (Accessed 15 Jan 2020).
<https://www.permaculture.co.uk/articles/comprehensive-plan-reverse-climate-change-project-drawdown>