Engaging and Empowering Academic Staff to Promote Service-Learning Curriculum in Research-Intensive Universities

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Abstract

Much of the literature on service-learning discusses issues related to faculty, students, and community partners. However, there is little research on issues related to academic staff. In this project, through a series of meetings and workshops, change lab methodology was used to analyze the barriers to staff members' involvement in service-learning, and intracollegiate collaboration supported their increased involvement in community-engaged curricula. A series of designed-research processes was utilized to create new artifacts, to mediate and foster a drive toward mutual engagement in the agential-structural relationship, to encourage staff members to engage in reflective practice, and to enable staff to empower themselves. After witnessing the real-life needs of a rural community and empowered through collaboration and professional development, academic staff devoted time to working with teachers, students, and community, further transforming themselves from a mostly administrative support role to that of researcher.

Introduction

*C*ompared to teaching universities or vocational colleges, most research universities commit few resources to service-learning and engagement-related research. This is detrimental to community engagement and community–university partnerships. Multiple studies have discussed organizational factors that influence university-based researchers' engagement in knowledge transfer *(Creso & Brenton, 2011; Jacobson, Butterill, & Goering, 2004)*, which highlights effective partnership management and opportunities for the cocreation of knowledge that is worthy of deliberate cultivation within community–university partnerships *(McNall, Reed, Brown, & Allen, 2009)*. Another set of studies has investigated the motivating and deterring factors that influence faculty members when considering participating in or leveraging service-learning as a resource. Whether the process is called "institutionalization of service learning" *(Abes, Jackson, & Jones, 2002; Bringle & Hatcher, 2000)* or the incorporation of service-learning in faculty development activities *(Bringle & Hatcher, 1995)*, it has been

shown that developing broad institutional commitment is critical to widespread integration of service-learning into teaching and learning practices *(Holland, 1997)*. As Holland and Gelmon *(1998)* commented, there are two challenges regarding higher education community engagement. The first is to change curriculum and institutional culture to encourage partnerships with communities based on mutual learning as well as mutual benefit. The second is to learn how to do it correctly.

The Carnegie Foundation for the Advancement of Teaching *(2015)* further defined community engagement as the "collaboration between institutions of higher education and their larger communities for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity" *(p. 2)*. Weerts and Sandmann *(2008)* studied six institutions (three land-grant and three urban public research institutions) and found engagement work was typically performed by boundary spanners in academic staff positions, not by traditional tenure-track faculty members. These boundary spanners often came from community organizing, practitioner, or nonprofit advocacy roles. Weerts and Sandmann found that this interpersonal level was a factor carefully scrutinized by community partners when evaluating an institution's commitment to engagement. However, few subsequent studies have discussed how these boundary-spanning roles could be developed to trigger changes in curriculum and institutional culture within an institutional context.

The research described in this article is a Humanities Innovation and Social Practice (HISP) project led by a project team of nine faculty members, four postdoctoral research fellows, and seven research assistants who went from a traditional academic research team to a university–community partnership interdisciplinary team. Through this transformation, team members acted as action researchers who believed in and had embraced a research university's transformation with respect to community-bounded work. This change reflects the findings of Holland and Gelmon *(1998)* and Weerts and Sandmann *(2008)*. This article documents the efforts of this project-based research team to ultimately reverse the effect of disproportionality, that is, the lack of learning opportunity for children, insufficient local medical service delivery, and brain drain in disadvantaged rural areas through community engagement, learning, and service delivery by campus-based faculty and staff.

To achieve its ends, this project took a participatory action research (PAR; *Chevalier & Buckles, 2013*) approach. This approach started with recruiting key stakeholders to collaboratively inquire

into knowledge that is created through university-initiated community engagement. While surveying learning resources available on campus, the project team found that service-learning pedagogy embraced "learning by doing" and experiential learning. Moreover, it used academic credit as an institutional motivator to encourage students to become more engaged in the community. Therefore, the change lab *(Engeström, Virkkunen, Helle, Pihlaja, & Poikela, 1996)*, based on activity theory, was designed to provide a methodology to expand the implementation of university–community engagement among faculty and staff through collaboration in community-engaged curriculum design toward incorporating community engagement issues into the current service-learning curriculum. This approach also was oriented toward shaping a culture of inclusiveness in the institution by enabling participants to lead the process and own it. This was done with the intention of making the intervention ecologically valid and the transformations systematic and sustainable.

The purpose of this article is twofold. First, it will present the initial findings regarding the impacts and institutional-level changes that the change lab brought about at a research university. Then, more specifically, it will address the following research questions: (1) In what ways do staff and faculty engage in this curriculum design process? (2) What are the challenges and possibilities for academic staff who wish to engage multiple stakeholders in curriculum design?

Project Context and Community Needs

The target of this study was National Cheng Kung University (NCKU) in Tainan, a medium-sized city of fewer than 180 million people in Taiwan. NCKU has been ranked as the number one university in the southern region and as one of the top three in Taiwan. This urban university was established in the 1930s and is well known for its industrial and engineering departments. It has 20,100 students and nearly 4,200 full-time faculty and contracted employees. From April 2014 to December 2016, one research project in the university was supported by the Top University Project subsidies, at a total of NT$31,000,000 (New Taiwan dollars). For comparison, the university spends only NT$800,000 per year to support 209 service-learning courses. The work distribution between tenure-track faculty and academic staff is representative of traditional faculty culture: faculty emphasis and rewards focus on research and somewhat on teaching quality, but rarely on com-

munity service. This is similar to the findings from Weerts and Sandmann's *(2008)* study of other research-intensive institutions.

The Humanities Innovation and Social Practice Project

The target for this research was the Humanities Innovation and Social Practice (HISP) project. Its mission was to engage with the community in disadvantaged areas, and it was supported by funding from the Ministry of Science and Technology, which supports indigenous research that creates real social impact and changes. The hope was that this project-based team would engage more faculty members from different disciplines to build capacity and ultimately trigger positive social change.

Inspired by Amartya Sen's *(1999)* ideas on human development and social justice, the project sought to set up a collaborative network where interdisciplinary research teams, civic groups, and individuals work together for community development. Following the definition advanced by the Global Alliance on Community-Engaged Research (http://communityresearch-canada.ca/), community-based research (CBR) uses knowledge and community–university partnership strategies for democratic social and environmental change and justice, particularly among the most vulnerable people and places in the world. The project has been trying to combat inequality in distribution of welfare resources in disadvantaged areas, support community capacity, and strengthen resilience through asset building.

A group of eight faculty members with teaching appointments from five different colleges (Medical Science, Management, Social Science, Literature, Planning) was organized by the Research Center for Humanities and Social Science of NCKU to implement the project in 2013. They reformulated their membership and mission to develop a system for physical and societal support. The project team worked mainly on team building among different disciplines and introduced the participatory research approach to faculty members. Three villages were targeted as the research field, and engagement was initiated in 2013. In 2015, after 2 years of engagement, the research field expanded from a community-based to a regional scale.

Challenges in Curbing Disproportionality Through Organizational Efforts

Disproportionality is not simply a matter of statistical probability, but a symptom of larger issues of equity in a society stratified along the intermingled lines of race and ability *(Artiles, 2011; Bal, 2011; Donovan, 2013)*. Disproportionality is a "runaway object" that is shared among and determined by multiple interacting social systems: schools, families, districts, and the local educational institution. Mitigating disproportionality requires that participants of those activity systems continuously collaborate and dialogue to examine and develop solutions *(Bal, Kozleski, Schrader, Rodriguez, & Scott, 2014)*.

Our partnering community, Gong-Guan, which is classified as "super aged" since 23% percent of its population are elderly people (over age 65), is a typical victim of disproportionality. The community's economy is based on small-scale agriculture (banana, bamboo, plum cordia), but its limited access to wholesale channels results in low-income status for its residents. It also lacks health services, police stations, and public education institutions. The only school has been shut down for over a decade owing to insufficient numbers of children, which makes it even harder for young people to access learning opportunities. The project team tried three unsuccessful initiatives, then started a distance learning service to support the local Presbyterian church's after-school learning program, which is organized by the church to provide learning courses for local children on weekends or in the evening on weekdays. Furthermore, we attempted to promote systematic thinking as a means for community development and to create a positive loop in order to leverage an internal solution. Our objective was to develop a solution that would address the issues of rural education and community rejuvenation simultaneously. Approaching this ambitious goal, as a researcher on curriculum design, I reflected:

> Education is holistic; it represents [a way to combat] disproportionality of many social determinants. It reveals many existing kinds of outsourcing (academics, parenting outsourcing) in which schools and communities address challenges in a piecemeal fashion, rather than in a systemic and collaborative manner. This inevitably results in conflicts and redundancies. A better strategy would be to establish positive leverage, engaging university, community, school and social sectors in mutual communication, to look for hidden connections among

different stakeholders, from seeing parts to seeing the whole picture of the system. Therefore, we could co-construct a new positive work structure that mitigates negative loops that snowball with each cycle.

In this case's context and in others, disproportionality is an adaptive systemic issue *(Bal et al., 2014)* that is not under any one entity's control. Collaboration and critical dialogue between local stakeholders and stakeholders in the institution are necessary.

Theoretical Framework

Activity Theory and Its Implications for Educational Transformation

Activity theory is a commonly accepted name for a line of theory and research initiated by the founders of the cultural–historical school of Russian psychology, L. S. Vygotsky, A. N. Leont'ev, and A. R. Luria, in the 1920s and 1930s. It deals with transcending the dualism between thought and activity, theory and practice, and facts and values. It provides a structured analysis method that can be applied to concepts, such as human activities—object-oriented, collective, or culturally mediated—and activity systems and elements, which consist of the object, subject, mediating artifacts (signs and tools), rules, community, and division of labor *(Engeström, 1987)*.

Based on this concept, there is a continuous transition between these components in any activity system. Along with embedded hierarchical levels of collective motive-driven activity, individual goal-driven action, and automatic operations driven by tools and conditions of action, internal tensions and contradictions are generated as motivating forces of change and development *(Engeström, Miettinen, & Raija-Leena, 1999)*.

Activity theory is widely used to study organizational transformation, contradictions and tensions in educational contexts, historical development of organizational learning, and university–school partnerships. Researchers extend their research themes to divergent contexts in different organizations and analyze how elements in different activity systems interact and "multivoicedness" emerges (*Engeström et al., 1999, p. 10*). It provides a research framework to capture complicated processes of social interactions among educators in collaborative work. As Engeström *(1987)* noted, using an activity system framework provides a collective, multi-

voiced construction of past, present, and future zones of proximal development.

A Praxis-Based Model of Systemic Intervention

Developmental work research (DWR), which is grounded in the research framework of activity theory, was developed at the Centre for Historical Activity Theory of the University of Helsinki. It is a methodology of investigating the links between individual and social dimensions of learning and knowledge creation. Its synthesizing nature places it at the intersection of education, knowledge management, and knowledge creation.

Informed by activity theory, the change lab, an application of DWR, was created for developing work practices by practitioners. The needs and possibilities for development are manifested by the process in an activity, not in relation to a given standard or objective, but by jointly constructing the zone of proximal development of this activity.

The change laboratory (CL) process *(Engeström et al., 1996)* implements the cycles of expansive learning that empower practitioners to engage in reflective cycles of deconstruction, reconstruction, trial, and readjustment on creation of new artifacts, production of novel social patterns, and expansive transformation of activity contents. The implementation of the change lab follows the cycle of systemic change in a series of stages called the *expansive learning model*: ethnographic analysis of the current situation (Steps 1 and 2); transforming the model (Steps 3 and 4); implementing the new model of activity (Step 5); and reflecting on the new practice, consolidating it, and spreading it (Steps 6 and 7). This model is illustrated in Figure 1. This process of development provides the opportunity for a continuous cycle of collective critical reflection and action among local stakeholders.
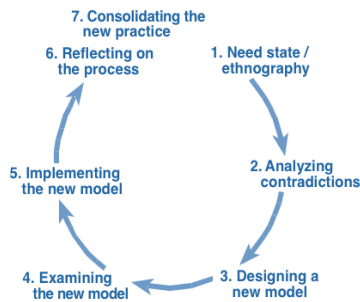

Figure 1. Steps of expansive learning. From "The Change Laboratory as a Tool for Transforming Work," by Y. Engeström, J. Virkkunen, M. Helle, J. Pihlaja, and R. Poikela, 1996, *Lifelong Learning in Europe, 1*(2), p. 11. Reprinted with permission.

Methodology

This section will highlight the participants of the study. It will also describe the actual implementation of a change lab as methodology and the data collected and analyzed in the study of the change lab as a strategy to empower academic staff to embrace and become involved in service-learning curricula.

Participants

Based on need and preferences of community-engaged curriculum design, the change lab at the institution of study in this project included a mission-based intracollegiate service-learning team. Its members were staff members from the Curriculum Division and Center of Teacher Education in the Office of Academic Affairs and the Extracurricular Activities Division in the Office of Student Affairs. The starting point was to transform regular team meetings from administrative discussions to *expansive learning*. The next step was to reformulate service-learning curricula, pedagogical training, and student activities and finally, to integrate the resources and practices.

Transformation of Work in an Educational Setting: Change Lab Implementation

In June 2014, the HISP project first approached the Curriculum Division to explore community-engaged curriculum design. After several months of collaboration, the HISP project team was invited as a member of the intracollegiate service-learning team. It was February 2015, and a new president of the institution had taken office and claimed community engagement as the university's mission. This institutional commitment encouraged the team to engage in intracollegiate activity. Therefore, the lab for intracollegiate service-learning collaboration was intentionally formulated to facilitate the crossing of work boundaries between the HISP project and campus units affiliated with service-learning.

Until mid-February, lab members engaged in the first stage of expansive learning: ethnographic analysis of the current situation to identify the focus of systemic transformation (see Figure 1). Then lab participants engaged in a strategic decision-making process: working together on an innovative community service-learning proposal and targeting the Gong-Guan community (one of HISP's three research fields) as a site to implement a community-engaged curriculum.

Since March 2015, the lab participants have met monthly for 2-hour meetings, as well as holding one quarterly empowerment workshop with all stakeholders: faculty, community partners, and students engaged in the Gong-Guan community. The consensus workshop started in June 2015. Table 1 compares characteristics of the lab with learning lab and original change lab.

Table 1. *Comparison of Change Laboratory in Theory and as Practiced in This Study*

Laboratory Method	Learning Laboratory	Change Laboratory	NCKU's Intracollegial Service-Learning Collaboration
Contents	Business and management problems	Past, present, and future of work activity	Past, present, and future of work activity
Concepts	Systems theory, system archetypes	Activity theory, models of activity, system and cycle of expansive learning	System theory, models of activity, system and cycle of expansive learning
Outcome	Positive loops lead to mastery of complexity	Resolution of systemic change contradictions leads to new mode of activity and contradictions	Resolution of systemic change contradictions leads to new mode of activity and contradictions
Distance practice	Practice simulated	Practiced observed and change from the site; laboratory is located in the workplace	Practice observed and change from the site; laboratory is located in the workplace

Note. Adapted from "The Change Laboratory as a Tool for Transforming Work," by Y. Engeström, J. Virkkunen, M. Helle, J. Pihlaja, and R. Poikela, 1996, *Lifelong Learning in Europe, 1*(2), p. 13. Adapted with permission.

NCKU's intracollegial service-learning collaboration initially employed systems theory to analyze the current situation of university–community engagement. After investigation, this study applied the change lab as a methodology to enact and study a real-life social relationship, situated in a real workplace, toward more engaged higher education. The action was founded on participants' and stakeholders' past experiences and history; project participants then undertook active engagements, participatory interventions, and sense making. In our interactions, elements of participatory action research were utilized as a norm such that professional engagement and primary intervention facilitated various forms

of reflection in multiple cycles that expanded activity systems. In PAR, (a) researchers and participants actively participate in coconstructing knowledge; (b) there is promotion of a critical and self-aware approach that leads to individual, collective, and social changes; and (c) researchers and participants develop an alliance while planning, implementing, and disseminating as part of the research process *(Chevalier & Buckles, 2013; McIntyre, 2008; Stringer, 1999)*. This follows a constructivist paradigm, with an emphasis on sensemaking in collaborative inquiry and action on inquiry question (action) and making meaning by constructing group knowledge *(Bray, Lee, Smith, & Yorks, 2000, p. 14)*.

Data Generation

In collecting field data for interpretation and analysis within the activity theory theoretical framework, the view of anthropologist Geertz *(1975)* was adopted. He wrote, "Not extraordinary empathy, but readily observable symbolic forms enable the anthropologist to grasp the unarticulated concepts that inform the lives and cultures of other people" *(p. 47)*. In this sense, findings were presented based on observable data, documents, outcome, and artifacts, although additional insights and empathetic understandings were explicitly gathered during the participation and the joint actions.

Table 2. Research Questions, Data Collection, and Analysis

Research Questions	Timetable	Data Set	Analysis
1. In what ways do staff and faculty engage in this curriculum design process?	Sept. 2014– Aug. 2015	Meeting minutes, interventions, and feedback from intracollegiate service-learning team	Categorization discussion with intra-collegiate service-learning team
			Triangulation of data and interpretation of themes and results
2. What are the challenges and possibilities for academic staff to engage multiple stakeholders in curriculum design?	Sept. 2014– Aug. 2015	Reflections and feedback from service-learning team and annual report	Evaluation of post-study understanding of service-learning team and collaborative inquiry

Moreover, under the process of action research, researchers tried to open themselves to the organization's situation to perceive the intermediary beneficial relationships embedded between

researchers and staff members. The research method consists of workplace observations, semistructured taped interviews, and analysis of organizational documents together with data from empowerment workshops, reflection activities, and self-examined daily records of coaching feedback (see Table 2).

Results and Discussion

What was found from the analysis of efforts of the intracollegiate service-learning collaboration, of faculty and academic staff involved in the community and change lab activities? Two major conclusions were drawn from the findings. Challenges were also noted.

Development of Tools for Collaborative Teaching

From September 2014 to July 2015, the intracollegiate service-learning collaboration progressed intensely with more interactions among interdisciplinary and interdivision faculty, students, and staff members. Development of tools as mediated artifacts to take action for achieving objectives (see Table 3) emerged in the work context. As Leont'ev *(1978)* explained, "you cannot teach or control motives, you can only cultivate and nurture them by organizing people's lives" (quoted in *Engeström, 2008, p. 87)*. This study had similar findings: Organization of the collective work life activities in which service-learning was embedded was of crucial importance for motivating and achieving performance. Embedded in the work context, the lab enabled a dense mediational setting, which is a set of interconnected new sociocognitive processes that modified old tools to create new tools.

Table 3. *Development of Intracollegiate Service-Learning Collaboration*

Tool Development	Objectives (Short-Term)	Outcomes
Panel of university–community collaboration	Benchmarks of best practices to motivate actions on intracollegial collaboration	Center of General Education invited teachers to cooperate with the project, but no concrete institutional measure Cooperated with Curriculum Division to develop professional development workshop

Participatory professional development workshop	Members reflected on what was done in 2014 and co-proposed positive factors for achieving 2015 goal	Self-evaluation helped team members overcome a bureaucratic mindset and made them more aware of the necessity for systemic integration
Designed community service-learning contents are embedded in 4 subsidized professional courses	To assist teachers to work out community-engaged activities in their professional course	The community service-learning contents were partially embedded into 2 out of 4 subsidized courses and fully embedded into 1 course
Tentative collaborations on students' and teachers' engagement in after-school distance learning initiative	Brokering teacher with after-school distance learning initiative	Engaged 8 teachers and 2 NGOs for collaborations
Learning circle initiated	Diagnose current process and challenges, propose institutional innovation on exploratory teaching	Planned curriculum structure aiming at service leadership
Gong-Guan as core community engagement partner	Gong-Guan, as a pilot case, to develop model of community-engaged service-learning	Collaborated with project team and working team to promote curriculum and activities

Possibilities Emerged During the Process of Engagement

The process of engagement with community and with each other through the collaboration and change lab spawned several notable outcomes. These relate to creating a milieu for discourse, building capacity as boundary spanning, and developing a community-oriented community within the university bureaucracy.

An expansive discourse and understanding generated a sense of capability. It was found that the overall learning experience depended heavily on how the members collectively and critically understand disproportionality through existing and new tools. The change lab offered a framework for collaborative inquiry and the process of making sense and meaning. It encouraged team members to integrate discourse and develop collective impacts on the project. Moreover, it was a situated learning space that allowed the participants to learn and have new understandings while interacting with others.

A dramatic change was found in staff not only acquiring effective skills and knowledge, such as participating in negotiations during meetings, but also using the tools for their personal cognitive integration. This kind of "appropriation" showed that the staff could properly combine their new tools with their preexisting skills that supported survival within a bureaucratic culture. They transformed their meetings, first through continuous informal contacts and communications, then through decision-making processes in formal meetings.

Development of work is possible when the practitioner's agency is advanced after the process of "appropriation." Edwards *(2005)* noted:

> New forms of practice are being required which call for a capacity to work with other practitioners and draw on resources that may be distributed across systems to support one's actions.… It is argued that relational agency leads to an enhanced form of professional agency which is of benefit to the objects of practice. *(p. 168)*

With awareness of their social relationships and their empowered capacity, staff members offered support and asked for support from others. Within less than 2 months, the working team generated four new courses for Gong-Guan that involve 10 faculty members, two affiliated NGOs, two specialists, and three different commercial companies.

Becoming boundary spanners: Nurturing listening skills and a service ethic. With the aid of the development tools—that is, communicative protocols such as panels and workshops—academic staff members created an open and safe social space to encourage a two-way flow of knowledge between different departments, as well as between institutions and communities. Moreover, the behavior of the staff members on the team showed a service ethic that was characterized by respect and a "community first" attitude. They acquired a more holistic viewpoint on the process of curriculum design, acting more like systems thinkers. This finding is consistent with Weerts and Sandmann's *(2008)* assertion that successful spanners

> effectively managed power relationships and struggles between institutional and community partners.… These struggles were best understood by the composi-

tion of governance structures and by who controlled the agenda during meetings. *(pp. 94, 97)*

Building a societal, inclusive working community within a schooling bureaucracy. The cultural tradition of a research university is a combination of bureaucracy and individualistic orientation *(Pernicka & Lücking, 2012).* Consequently, there is usually little incentive for collaborative teamwork. The change lab initiated a "whole system" working environment through workshops such that participants could connect with one another to engage in service-learning curriculum, share their discoveries of role and power relationships, and take action. Well-designed activities for sharing personal histories and the exposure of working experiences increased understanding among participants, empathy, and holistic thinking about relationships behind the "work." The executive secretary reflected on her insights after the first lab meeting:

> Now I know why colleagues from Student Affairs were always delaying their reports until the last minutes, that's because they are quite busy dealing with students' affairs.

Since June 2015, members of the intracollegiate service-learning team have gradually engaged more in curriculum and community activities in the Humanities Innovation and Social Practice project. Since the HISP project initiator and senior researcher was not a faculty member at the target university, perceptions of insufficient information and lack of communication led to uncertainty and tension. Excerpts from an after-school learning project meeting are presented to illustrate some of these tensions and lack of clarity as follows:

> *Researcher:* How do the team members cooperate; how is information distributed among various classes?

> *Executive Secretary:* We have to make a "must-do" list, the *work distribution* must be clear. For example, we specify: Could you write down your experience that [we] could share with other teachers? E.g., how long will it take to give feedback on student journals from distance learning? What must be done before and after distance learning? That's easier for other teachers to follow and catch up.

> *Researcher:* You're right… the work distribution must be clear… among different activities. We never did this before. Now it is clear so everyone understands the weekly regular work contents in the current collaboration structure.

Through redefining "the division of labor" on the after-school learning project by academic staff and project specialists, an internal partnership between project and institution has been created, and related institutional procedures have been restructured to support implementation. Moreover, the change lab process has encouraged agency among the stakeholders who inhabit multiple activity systems. Students and staff members are empowered as para-educators, and faculty colearn and connect with community partners. With new relationships built among stakeholders, there is more interdependency and reciprocity in sharing information, resources, and knowledge. This new approach is appreciated and appears to be gradually transforming academic work into a kind of societal, inclusive working community.

Staff members were motivated by the process of development of work toward such a working relationship. One staff member has expressed that although coordination increases workload, "I feel that I work with a team." Another said, "Compared to documents and texts, I found that engaging with community issues is more meaningful." All those efforts lead to a process of "job crafting." Their work identity has been reformulated so that they feel that they are doing unique things. They better understand that what they commit to would generate collective efforts, which would result in a value that is both societal and educational. As Weerts and Sandmann *(2008)* discovered,

> Trust and power sharing can be developed through building flexible governance structures and porous structures that enable meaningful university–community exchanges to take place.… Partners continually negotiate and restructure community participation in shared governance, shared staff positions, and committee work. *(p. 82)*

This work team has worked intensely throughout this 3-year project as it coorganized and implemented a "whole system" lab with faculty, students, staff, community partners, project specialists, and local authorities. The intracollegiate service-learning team

represents distributed agency with collective intentionality. It has encouraged new qualities, such as an emerging landscape of collaboration and social production, as reflected in a meeting discussing students' self-directed community engagement:

> *Researcher:* Let's reflect what was done last semester. I found that members of this mission-based team, with a collective intentionality to develop a community-engaged curriculum, went beyond the boundaries and gaps between institutional sectors and project-based teams. This type of "intra-agency" could connect and reciprocate across boundaries, and beyond teamwork itself. Like the nodes and links in mycorrhizal networks.

> *Director of Center of Teachers' Education:* Um… I understand… this university is like a plant, and the visible fungus is like our mission team, who is intimately contacted with its surroundings. The objective of the mission team is to expand the invisible organic texture like the mycelium layer, which soaks up water and nutrients over a larger area to provide to the whole plant.

> *Researcher:* Act like the links in the mycorrhizal network, and coexist with the "plants." This is how we could influence the institution with respect to service-learning, so that it can create social impact and help to bring well-being to disadvantaged areas.

People who engaged in developing a community-engaged curriculum for disadvantaged areas act as boundary crossers to connect and reciprocate with their own intention and agency. Engeström *(2006)* used the term *knotworking* for this emerging way of organizing work that initiates collaboration between partners without strong predetermined rules or central authority. Engeström has compared such collaborations to mycorrhizae, symbiotic networks in which plant roots and fungus live in intimate contact in order to exploit complementary forms of metabolism. The mycorrhizae-like formation that is the foundation of knotworking typically does not have strictly defined criteria of membership; rather, its members are distinguished by their activism *(Engeström, 2006)*.

Challenges

> I know we are trying "to do the right thing." Though doing this requires jumping out of the box, the bureaucratic thinking, we are pleased to learn by doing.
> —*Executive secretary of intracollegiate service-learning team*

At the research university that was home to this project, data indicated that academic staff members felt that they are treated as supplemental to the faculty, who assume staff are less professional and lack expertise. One member of the team expressed how she felt powerless when dealing with teachers' complaints about administrative processes and how she lacked financial support for outbound service-learning activities. Staff members often feel frustrated when the school's annual budget for service-learning is decreased. With no institutional commitment, it is even harder to create innovative community-engaged curricula.

Although this project documented how academic staff can be empowered to practice boundary-spanning roles at the interpersonal level, the organizational elements of "architecture" (e.g., leadership, structure, and rewards) still remained as "engagement de-motivators." As Weerts & Sandmann *(2008)* claimed, "campus leaders were essential in tipping institutions toward engagement and served as key leverage points to move research institutions toward a two-way interactive philosophy" *(p. 82)*.

Implications for Practice and Future Research

This case represents the development of an alliance between researchers and participants, which involved planning a systemic intervention, implementing the change lab method from developmental work research, and disseminating outcomes through cocreating new artifacts. This study has important implications for practice and future research.

Research universities moving toward being engaged campuses could utilize the change lab methodology to examine and address institutional challenges to incorporate community-engaged service-learning into the curriculum and organizational culture. Next, they could incorporate service-learning in faculty development activities. As this study has shown, such capacity-building steps empower staff and faculty to nurture their own relational agency to become boundary spanners and embrace and model a service ethic. Moreover, this case demonstrated that collaboration initi-

ated by distributed entities (team members and organizations) and leadership across their members is one possible approach to setting institutional goals, assessing current conditions realistically, and monitoring progress toward the desired level of implementation of service-learning.

Finally, this study reinforces and recommends that learning through service and reflection—that is, service-learning as a pedagogy—promotes active citizenship and is grounded in everyday institutional environments. It is not only for staff development in the workplace, but also for informal learning settings. As pedagogy and as professional and organizational development, it introduces a new way of learning designed to nurture what Fitzgerald and Zientek *(2015)* described: "a public-spirited practice… but part of the messy, difficult, give-and-take process of problem solving" *(p. 30)*. Therefore, it is highly recommended, based on this case, to invest in emergent or developmental evaluation to move within the messiness toward institutionalization.

These implications lead to acknowledgment of the limitations of this study and future research:

- The qualitative data includes perspectives of academic staff, but not those of other stakeholders. Life experiences and perspectives from students, faculty, and community practitioners who are engaged in service-learning would provide a more comprehensive and situated understanding of these change efforts.

- The study was performed under short-term, project-based conditions and focused on transforming staff members' boundary-spanning roles to mitigate engagement barriers at an interpersonal level. Due to the short term of engagement, the study does not include sufficient evidence to analyze the optimal interpersonal- and institutional-level interaction that could promote an "engaged campus" that would build and sustain university–community partnerships.

There is still a long way to go toward an optimal systematic developmental approach to community–university partnerships. The practices demonstrated through this action research case

provide insights into long-term possibilities on how to enable a research university to fulfill its social responsibility through curriculum reform wherein students learn in service with local communities, such that universities and these communities together can build "a network of actors" for cocreating a force for social change, a network that can trigger active, collective, and enduring momentum for community development.

By engaging local communities through social practice in research and teaching, universities can interact with them in such a way as to form mutually beneficial relationships through which all parties can grow and develop together. This requires transformation at the institutional level and pedagogical innovation. A number of institutional-level strategies hold promise:

- initiating appropriate rewards and structures with support from institutional leaders;

- diversifying stakeholder engagement, both physically and virtually, to improve public participation in knowledge production in order to cocreate visions and coworking as change catalyst; and

- fertilizing intracollegial cross-sector collaboration that encourages distributed cognition and leadership.

Pedagogical innovations are also needed:

- developing participatory (and emancipatory) pedagogies to help learners and participants to name their "word" and name their "world";

- encouraging transdisciplinary communication through narratives and collaborative teaching and inquiry; and

- supporting and coaching students, which can encourage them to self-organize, realize their authority with regard to their own learning process, and enable them to learn and research spontaneously.

The relational agency from staff in this study generated a "collegiality of working together" that unleashed possibilities of creating a service ethic in the workplace that triggered changes for community-engaged curriculum. An ancient African proverb says, "If you want to walk fast, walk alone. If you want to walk far, walk together." Based on the progress of this case, it seems we are walking together in the right direction.

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