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## 32. Experiences with implementing the Living Lab concept in rural Tanzania

Evariste Habiyakare, Sakariina Heikkanen & Kalle Rähkä

The Living Lab (LL) concept is a widely used tool, especially in developed countries. Living Labs are a good way to establishing an open collaborative innovation among different stakeholders in real-life settings. The aim of this paper is to share experiences with a capacity-building project financed by the Finnish Ministry of Foreign Affairs and jointly planned and implemented by four higher-education institutions. It involved Diakonia university of Applied Sciences (DIAK) and Haaga-Helia University of Applied Sciences from Finland and the University of Iringa and Sekomu University in Lushoto. During our joint planning meetings, we decided that the Tanzanian partners could adopt the LL concept in their daily practices. In order for the Living Labs to be established and to function in a sustainable manner, the project actors agreed that local university lecturers and staff should be trained in the Living Lab concept and methodologies from a pedagogical and practical point of view.

### INTRODUCTION TO THE CONCEPT OF LIVING LAB AND COLLABORATION FOR CO-CREATION

In today's customer-empowered world, collaboration and co-creation competencies are critical to the future growth of the economy (Bhalla, 2011). In developing countries, it is especially important to build communities sustainably so that all parties are involved in the process. Recently, different African countries have been struggling to invent their own development models. They often tend to adopt practices found to be successful in Western world. In this perspective, the Living Lab concept has been attractive to many.

The Living Lab concept is widely recognised as a powerful tool for co-creation and for developing user-driven services. Living Labs are platforms for open innovation in which co-creation is a method for addressing real-life issues through acknowledgement of information from multi-disciplinary social learning in which representatives from different sectors, as well as communities, may have different values, perceptions and meanings. They are a 'socio-technical platform with shared resources with a collaboration framework, and real-life context, which organises its stakeholders into an innovation network that relies on representation

and diverse activities and methods to gather, create, communicate and deliver new knowledge, validated solutions, professional development and social impact' (Westerlund, M. and S. Leminen, S 2011).

The above definitions provide a rich set of ideas and values for co-creation that may be used for shaping and creating a strategy for community development in a collaborative manner. Living Labs have become a common instrument in many developed countries to increase interaction between parties relevant to innovation processes. However, Almirall et al., (2012) assert that Living Labs are driven by two main ideas: involving users as co-creators on equal grounds, with the rest of the participants in real-world settings. Thus, Living Labs are practice-driven organisations that facilitate collaborative innovation and are real-life environments where processes are studied and new solutions are co-created. Initially, LLs were formed as a platform on which partnerships, public authorities and citizens worked together to create, validate and test new services, businesses, markets and technologies in real-life contexts in cities and rural areas. Later, LLs began to focus on a broader area of open innovation and co-creation of products, services, and societal innovations together with users (Nittamo et al.2012). LLs therefore can work as bridging platforms to support collaboration between different entities such as communities, private and public sector, universities and NGOs. They can also connect endogenous knowledge pools and knowledge from other LLs participants to create new knowledge and apply it in new contexts (Leminen and Westerlund, 2012).

The debate about and practices involved in community development regarding the Global South has shifted its emphasis from top-down directed models towards bottom-up approaches. The assumption is that local stakeholders should self-organise, adapt and adjust to various changes and actively respond to rapid changes in the market, technologies and setbacks from exogenous economic situations (Berkes and Ross, 2013). The new focus emphasises the sustainability and resilience embedded in the adaptative and learning capacities of local communities (Hooli, 2015).

Within the global economy, socio-economic resilience has been particularly challenging for local African communities. Most of the rural people have not participated actively and with full potential in contributing to the expected sustainable development. Until now, the focus of resilience analysis in most African countries puts emphasis on the ability of the community to either recover from or avoid various disturbances. Yet, less attention has been paid to the long-term processes of communities to learn and to adopt new methods and activities in order to fully improve their own livelihoods. (Hooli et al.K. 2016).

Folke (2016) emphasised the fact that resilience depends on the long-term adaptive capacity of communities based on renewal, development and innovation. This raises the discussion about the role of different stakeholders, such as higher educational institutions, to develop appropriate methodologies and instruments to catalyse socio-economic resilience in rural communities. (For a complete literature review, see Hooli et al., 2016.)

Several African countries face similar development challenges: financial market development, equal opportunities, employment rates, infrastructure, quality and equality of education, rural development and lack of ICT – just to name a few. They have adopted the concept of Living Labs in, for instance, Tanzania, Kenya, Ghana and Senegal (IST African meeting report 2012). In their seminal work, Hooli et al. (2016), studied LLs in Tanzania and the knowledge-creation process and their contribution to socio-economic resilience and poverty alleviation. The authors were able to identify seven Living Labs established in Tanzania and were able to depict their development path and could classify these LLs according to technological capability and organisational performance (Hooli et al, 2016, 65).

Our project, Building Sustainable and Resilient Communities through Co-Creation (BUSCO), aimed to build sustainable communities through the co-creation model. We wanted to establish and develop a

co-creative model Living Lab for university and community/business collaboration. From the Finnish partners' perspective, the capacity-building project targeted two local universities. The project aimed at strengthening these local universities' capabilities in order to better deal with their respective communities. Particularly, the faculties of Community Development, Business, Tourism, Law and Psychology/Counselling were targets for capacity building. This was due to the orientation of Diakonia University of Applied Sciences, which acted as a leading partner in BUSCO. The institutional capacity building involved activities such as curricula development, Living Lab integration in curriculum, ICT infrastructure development and development of libraries.

For the local universities, the core activities focused on capacity building for communities. In this regard, local universities aimed at improving entrepreneurial knowledge, counselling services, legal aid, ecotourism services and improving nutrition and environmental conservation for sustainable and resilient communities. By disseminating the results of each output area, other faculties and services of the universities benefitted from the project as well.

Prior to implementing capacity building, we held several planning meetings in Helsinki and Tanzania. The project started with a collection of baseline information. Our local partners used semi-structured interviews with local stakeholders, including municipalities, decision-makers and representatives of organisations and businesses (i.e., shop owners, local restaurants and local producers). In addition, they used surveys and collected data from different villages. In addition, together with our Tanzanian partners, we conducted field visits several times to observe and to conduct focus groups. We met local communities in their natural settings. We conducted numerous workshops and training sessions and collected feedback from these workshops. We analysed data by using a number of techniques such as content and thematic analysis. (We will report the results of this research in separate publications.)

For the sake of space, this paper only shares the experiences of how we introduced the concept of the Living Lab as a part of institutional capacity building. We discuss how our local partners perceived the LL concept and the role higher education institutions could play in order to co-create solutions with surrounding communities. Next, we present the Haaga-Helia case, which was used for benchmarking university, community and stakeholder co-creation.

## A CASE OF LIVING LAB AND PEDAGOGICAL PRACTICES AT HAAGA-HELIA

The Haaga-Helia Porvoo campus is one the Finnish universities of applied sciences applying the concept of the Living Lab as a pedagogical approach. At its core, it is a symbiotic co-operation between various external stakeholders. According to Kalle Rähä (one of BUSCO's key experts), from a university perspective, the Living Lab could be illustrated as the following:

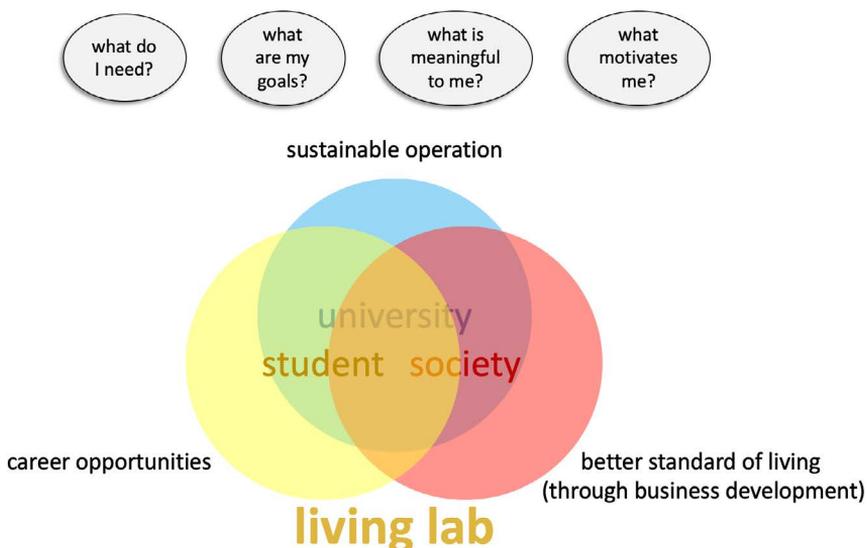


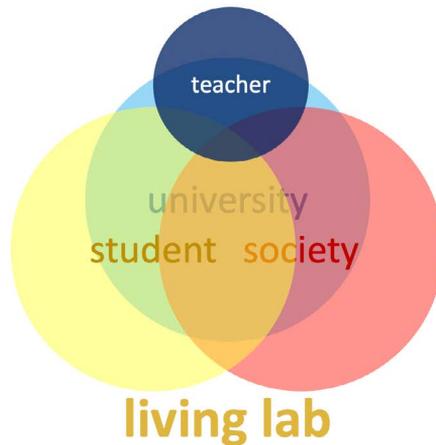
Figure 1. Living Lab and sustainable operation. (Figure: Kalle Rähä)

For Haaga-Helia, there is no specific 'Living Lab' within the campus that one could visit. Instead, the semester preparations normally begin by finding suitable partners (called 'project commissioners') who can offer project work, which largely matches the learning objectives of the students' courses (called 'competence modules') in a given semester. Since the LL concept employs a constructivist approach, as students advance, they are also empowered, encouraged and finally even required to find their own project commissioners.

The process starts with a meeting with potential project commissioners to ensure they understand what we expect from them and what type of results and co-operation they can expect from us. In addition, we discuss how much time, effort and money they are able and willing to invest in the project.

As shown in Figure 1, the Living Lab can be a sustainable platform for all parties, each equally benefitting from co-creation. A Living Lab may create new solutions, new knowledge, compelling ways of learning and teaching, networks and unexpected opportunities. If there are learning objectives that we cannot adequately reach through project work, we may support it with traditional teaching methods: cases, assignments, essays, studies, presentations and exams. However, the deliverables from the semester project must have serious weight.

The role of a teacher in LLs may vary from traditional teacher to that of a coach. However, once the projects start, one of the tasks is to offer a theoretical framework to students. Figure 2 illustrates how the project may be a platform for students' professional development and how it offers a practical context in some of the larger concepts and competences. The model is student centric and allows them to be creative and to ask for help when needed.



**Figure 2.** *The Living LabLiving Lab and the role of the teacher. (Figure: Kalle Rähkä)*

In a short, the application of 'co-creation through Living Labs' is, by its nature, a very different job for a teacher. Learning to teach in Living LabLiving Labs in a meaningful way requires a serious rethinking of one's identity as a teacher, even if one can see the benefits and desires to develop the job in such a direction. Furthermore, it often is a challenge, even for students, to understand how working in projects is beneficial for them. Sometimes, learning situations are chaotic.

#### **BENCHMARKING THE LIVING LABLIVING LAB MODEL IN UNIVERSITIES IN TANZANIA**

Understanding how universities involved in Living LabLiving Labs support the surrounding community to develop was very easy for the Tanzanian partners. People had an inspired approach to the task and, for instance, the local partners conducted baseline research thoroughly. Different stakeholders spent plenty of time highlighting a variety of fundamental needs in the areas of entrepreneurship and business development, agriculture, ecotourism, women's rights, family consultation and legal aid. Key BUSCO teams of experts also had many ideas on how to respond practically to the needs of the community. The benefits for the society created by the 'development aid' offered by the universities was self-evident. Members from each faculty presented their plans on how they would strengthen the surrounding society with projects commissioned and governed by their very own faculty-based Living LabLiving Labs.

Gradually, the need for actors to leave their comfort zones became more accentuated. We discussed the question of the benefit of co-creation in LLs with the students and the university. Many of the key experts voiced their concerns over the overwhelming bureaucracy connected to an obviously imminent curriculum renewal if the studies were to be completed in a Living LabLiving Lab. However, the experts also understood how the Living Labs would not survive very long outside the scope of funding from the BUSCO project unless the co-operation offered near-equal value to all three stakeholders: society, students and the university. All agreed there should be a major curriculum change before any practical implementation was made. The current curricula need to be flexible enough to enable learning in LL projects with unexpected events. The learning and teaching should become more student centric and the teacher should show how theories can be applied in practical circumstances.

Another local argument was the widely perceived need for proper facilities. First, there would need to be a building that one could call a Living Lab, community resource centre or anything that would provoke interest and symbolise a space for co-creation. Therefore, the next challenge was to convince local key experts that the Living Lab is not a building, nor does it require major changes in the structure of the university but rather in the nature of work. The idea of 'bypassing' was introduced, meaning that if actors want to achieve the results of co-creation but cannot have a new curriculum or a specifically appointed building, how can they bypass these restrictions and still do it on some level? Overall, it seemed easier to open a physical facility and give it a name – instead of bypassing obstacles – and just start working in a Living Lab, thus benefitting all stakeholders: universities, municipalities, companies, locals and end-users.

Yet another issue to solve was the keenness of different faculty members on having their own LLs. Multi-sectoral LLs are common in Europe; thus, we wanted to integrate that concept in LLs in Tanzania as well. Initially, the idea was to have one Living Lab (or community resource centre, as it is called today) that could serve the needs of the community from a variety of angles, especially considering the faculty members' varying needs

It does not stretch the imagination too far to think of a woman who, after her husband's death, is running a small farm by herself and is threatened by the late husband's family to leave the land, while also struggling with crop yield and finding more profitable and fairer channels in which to sell her products. Obviously, this would be a case for Living Labs focused on legal aid, women's rights, agriculture and entrepreneurship. In the worst case – and due to a strong bureaucratic culture – we could face the following scenario: the potential client could approach, say, the entrepreneurship Living Lab but would be turned away because the people in charge might interpret the case as a women's rights issue. She might go to the people running that Living Lab, who would advise her to talk to the people in the legal counselling Living Lab. The reader can probably already guess how this all might end.

Eventually, the Tanzanian partners agreed that perhaps it would be best if each faculty found ways to work together in a centre intended for the co-operation of a variety of stakeholders. Still, it was not an easy idea to adopt. This might partly illustrate how difficult it is for all of us to leave our old conceptions, habits, attitudes and cultures behind. Here also needs to be enough flexibility in any concept to adapt to different environments. Change is usually seen as an obstacle rather than an opportunity. Also worth highlighting is that mistakes may occur. If something does not seem to work out, it is possible to learn from that situation.

## MISCONCEPTIONS AND LACK OF READINESS DUE TO HARDSHIP

In the beginning, it seemed that co-creation with the community put more emphasis on students actually doing the work while the community stakeholders enjoyed the benefit. In addition, instead of teacher being responsible for ensuring students' learning, the teachers' role morphed into becoming project managers and/or agents for securing the desired outcomes for external stakeholders. The concept of co-creation between universities, municipalities and business, where the end-user would be always in the centre for co-creation, was not for them to grasp. The main motivation was the funding that enabled the work, rather than the desired outcomes of the project.

Overall, we observed a big challenge related to a general lack of a vibrant private sector. This led to the fact that promoting entrepreneurship became difficult. On the other hand, it was easy to identify the needs on all levels of business. Small businesses tend to be relatively small and disorganised. The needs of the local community are often so elementary that it is difficult to arrange something one might call co-creation, a

mutually beneficial project developing both the capabilities of the community and the skills of the students. The course contents, on a conceptual level, are close to the same as we have in Finland, which can easily lead to a situation in which learning objectives are related to complex corporate issues, while the projects aiming to support the learning are on an extremely basic level.

In addition, the organisation, structures, culture and views on studying, teaching, learning and co-creation may be traditional, and changing the mindset of certain teachers and university administrators and even some students proved difficult. Nevertheless, rural Tanzania offers plenty of opportunities. Since the needs are diverse and often not of very complex nature, any kind of help counts, meaning that students can actually make a huge difference. When the effect of co-operation between universities and local communities accumulate, society might even begin to ascend to new levels. As well, small businesses become more economically viable and the challenges they offer students become more sophisticated and therefore more intriguing, thus educating the students working with, for instance, local entrepreneurs. This, however, will require generations of students and potentially decades of hard and often frustrating work by the university staff.

## CONCLUSIONS AND REFLECTIONS

At the end of the project, several themes and clusters related to the Living Labs evolved and different outputs were achieved. For example, we established an ecotourism centre at SEKOMU, which in turn successfully trained ecotourism guides. In addition, SEKOMU, in collaboration with local authorities, were able to draft a regional tourism strategic plan. For both universities, we developed a business and marketing plan and mapped out potential businesses where tourism students could look for internships. Both partner universities organised thematic entrepreneurship trainings for university staff, students and local stakeholders; the training involved themes such as service design, business planning, market analysis, marketing, networking, pricing, safety, hygiene, cold chains and social media.

The University of Iringa was able to develop a counselling service clinic/training facility for students. In addition, counselling outreach services were developed. These services target mostly vulnerable groups such as women, children and the disabled and abused. The University of Iringa organised training for local government authorities on peaceful conflict resolution. The SEKOMU and Iringa Universities were able to develop legal counselling service/paralegal groups and could conduct instructor training. In addition, local partners organised capacity-building workshops for local authorities on human rights. Both universities conducted thematic trainings on different themes such as nutrition, environmental conservation and gender rights and equality.

The project aimed at creating a well-functioning co-creation model that benefited the following: local Living Lab participants, entrepreneurs, people in the communities and villages, vulnerable groups such as youth, women and the disabled and abused, and NGO representatives, local government authorities and representatives of local business associations.

In order to institutionalise these practices, we created a Community Resource Center at the University of Iringa. This centre will still act as a link between the university and the external community and will continue co-operation with existing initiatives such as Kiota Hub, TANZICT. Furthermore, the partner universities were empowered by the improved internet and computer labs, were trained in project-based learning, co-creation and service design methods, and strengthened their online teaching capabilities.

Overall, the project was a stimulating experience for Finnish partners too. There are some areas of development on the African continent, and it would be beneficial for Finnish actors to start gathering more

experiences and knowledge about the continent. Despite foreign aid to Tanzania from different countries (such as Finland), it was discovered that there is still a lack of basic business infrastructure and policy. Big businesses and formal business structures do exist in big cities such as Dar Es Salam, but rural development and sustainability have some space for improvement.

At this stage, a question regarding the level of readiness of our partners to run LLs after this capacity-building is still unanswered. As often is the case in developmental work that requires a potentially significant shift of mindset, it seemed some individuals were convinced, while others still have doubts. For example, the organisations in general did not seem very open to change, and the practices are still bureaucratic. In order for Tanzanian universities to benefit from LLs and co-creation, there is a need for a 'grassroots movement'. Different actors need to understand the expected long-term results as illustrated in Figure 3.

Finally, as a Finnish higher education institution, we need to ensure that when we choose partners, we adapt our means and resources co-creation context in the best possible way.

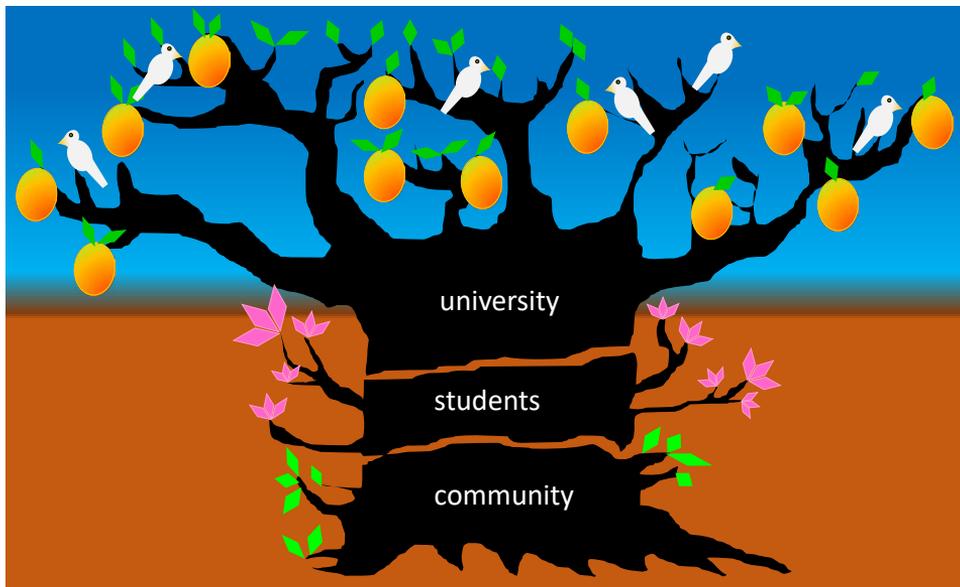


Figure 3. Living Lab in rural areas. (Figure: Kalle Rähä)

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