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Trajectory of the IRIS project

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Introduction

The Tanzanian Tumaini University Dar es Salaam College (TUDARCo) and the Finnish Turku University of Applied Sciences (TUAS) have collaborated from 2012 onwards. In the beginning, the partnership was based on the North-South-South Library and Information Studies Network, a domain of five higher education institutions (HEI) from Africa and three from Finland. In 2016, TUDARCo and TUAS started bilateral collaboration and applied funding for the project IRIS from the HEI ICI, the Higher Education Institutions' Institutional Cooperation Instrument.

IRIS, Introducing Reverse Innovation to Higher Education Institutions in Tanzania concentrates on active pedagogy development through innovations and community interaction. The innovation pedagogy of TUAS is an active teaching and learning approach that combines theoretical knowledge and practical skills together. TUDARCo in turn was prepared to reform the pedagogical thinking to improve learning outcomes, motivation of teaching staff and interaction with surrounding communities. The intention of the project is not to transfer the pedagogy from Finland to Africa but rather develop an active pedagogy model suitable for the Tanzanian context. Tanzania is an extremely diverse society and collaboration provides an interesting and complex environment to test and develop TUAS' innovation pedagogy further. In addition, the project IRIS allows partners to review the reverse innovation model in practice in respect of human right principles such as equality, non-discrimination, participation and inclusion, accountability and transparency.

The project IRIS committed to the theory of change through result-based management that emphasises achievements, how the actions influence on change instead of what has been done. The chain proceeds through inputs, outputs, outcomes to impacts that are long-term changes.

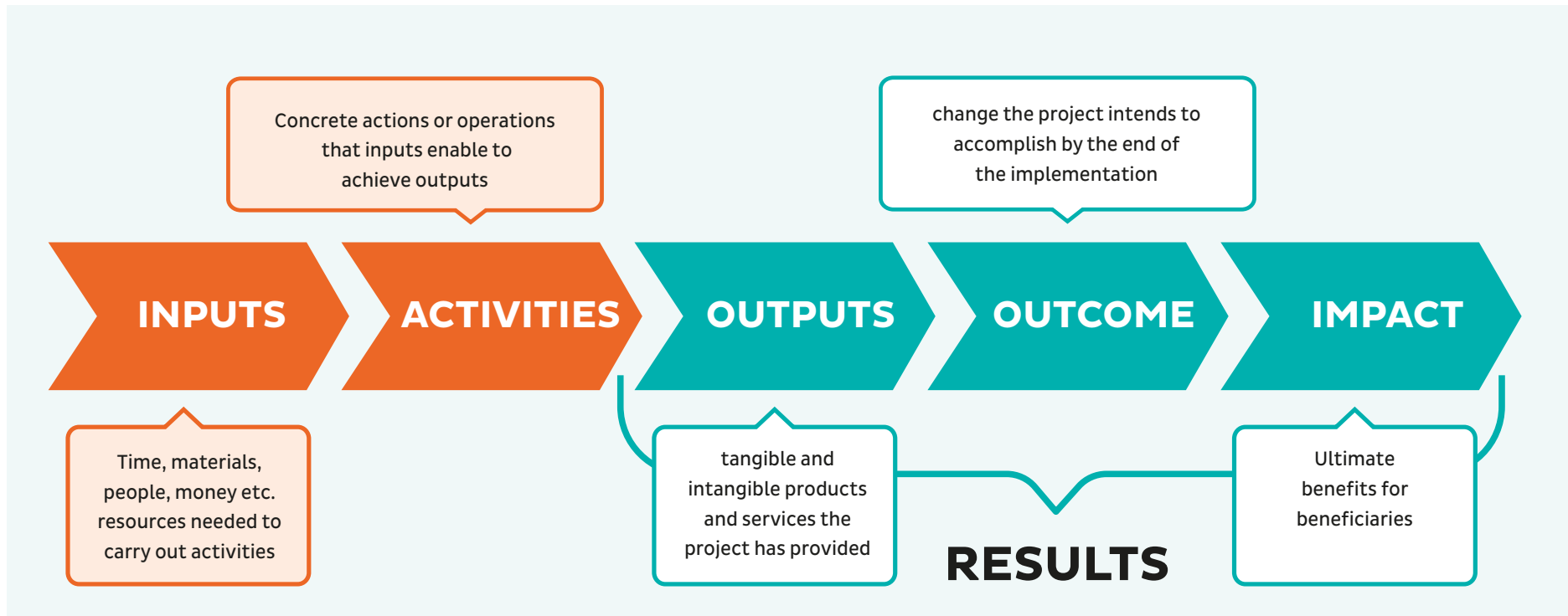


Figure 1. The results chain.

In this publication, we will cover the trajectory of the project IRIS from 2017 to 2020. The project team members present their views and experiences of IRIS, how the development project managed to tackle the challenges and reach the goals successfully. The abbreviation IRIS stands for Introducing Reverse Innovation to Higher Education Institutions in Tanzania. In fact, at the beginning of IRIS, the project team in both TUAS and TUDARCo were rather uncertain about the reverse innovation concept. Traditionally, innovations are considered to arise from the countries of science and technology whereas products are sold to the developing world with high costs. In reverse innovation thinking, the concept has been turned upside down. The

idea arises from a community and it is processed locally and not in another society. Grassroots innovation thinking was connected to IRIS, which provided a good platform to pilot and examine the concept of reverse innovation regarding needs of local community and active teaching and learning approach in complex environments. The first chapter, *The Art of Enabling Reverse Innovation – a Complexity-Based Approach* is relevant contribution of **Harri Jalonen** to the discussion on the concept of reverse innovation.

The expressed the ultimate goal of the project IRIS is “to increase the active role of HEIs to cultivate ideas arising from communities,

to support communication, concrete collaboration and information sharing which promote participation and equality in the society". This aim was agreed to reach through the following three result areas:

- » Pedagogy model development that embraces the active learning and teaching approach regarding local needs, multi-disciplinary interaction and knowledge creation.
- » Establish interactive relationships between university, entrepreneurs and local communities.
- » Improve library and information services to support access to information.

Each result area is viewed in more detail in the publication. The paper of **Gertrude Ntulo** and **Markku Rajala** focuses on developing and piloting the teaching and learning elements included in the FinTan pedagogy model. Especially, Ntulo and Rajala review experiences of tackling the challenges and adaption of the active learning model to TUDARCo. *Bridging the Gap Between Community and HEIs: A Case of micro-entrepreneurs of Julius Tweve and Nancy Macha* in turn concentrates on the second result area. The authors not only present how the new relationships and networks were established but in addition they clarify the nature of local entrepreneurship and how local needs were implemented into learning processes. The text of **Riikka Kulmala** and **Gideon Ntungwa** indicates how the IRIS project improved library and information services applying service design methods. Participatory workshops with library professionals, library students and teachers generated service models based on information needs micro-entrepreneurs had indicated.

One of the main goals piercing all result areas of IRIS is to increase active dialogue and concrete collaboration between different sectors in society. Therefore, the project emphasizes the importance of effective communications in increasing awareness and engagement to its stakeholders such as HEI communities, entrepreneurs, NGOs, authorities and library professionals, for example. The article of **Sinyati Tira** and **Paula Ailio** indicate the importance of external and internal communication.

The final chapter of **Petri Uusikylä** *Endeavour to Innovate – Learning Experiences from the IRIS Project* examines the change the project IRIS generated. Uusikylä reviews the project from the perspective of evaluation and he highlights IRIS as a platform of learning at the levels of society, community, university and individual.

Melting borders through social identity

In addition to innovation process concepts, complexity thinking and theory of change, we may argue that the social identity theory is connected to IRIS. The theory of social identity highlights the meaning of group membership and relations between individuals and variety of groups in society (Tajfel 1982). According to Mor Barak (2017), memberships of social groups are significant, and people tend to categorize themselves and others rather through group connections than by paying attention to individual characteristics. However, people often belong to several groups at the same time and in addition, they tend to leave groups quite easily and change from one group to another. Nevertheless, long memberships, some of them even lasting a lifetime, are not exceptional. Tajfel (1974; 1981) maintains the dynamic nature of social identity, which means that people stay in one group only as long as the membership is significant for them. Identity building and groups are connected to each other because it seems that groups offer people not only membership but also a meaningful platform to build their identities (Tajfel & Turner 1979).

According to the theory by Tajfel (1982), social identity is built through three stages, which are social categorization, social identification and social comparison. To shortly describe the first, social categorization refers to the group identification, which is done by individuals themselves or by others, and simply this can be done through profession, religion or political connections, for example. During the second phase, social identification, people evaluate the significance of groups and especially, they compare their own attitudes and norms with the values of the group they include in or tend to include in. The group approach might be compatible and so an individual is willing to adopt normative ways to act, behave and communicate as a group member. The third and last stage is social comparison in which the members evaluate and

compare the ingroup with other groups. This means that the people who are members of a group establish an ingroup, whereas from their perspective others who are not participants in this certain team form outgroups. The language use and interaction may concretize the difference between the ingroup and outgroups and clarify social identity steps. From the perspective of the ingroup, the pronoun “they” indicates others, people of outgroups, whereas the personal pronoun “we” refers to us, the ingroup members. We share similar awareness and perceptions among the group whereas *they* have other and different views compared to ours among our ingroup. According to the social identity theory, members of a group have tendency to favour their own group members over the others. The social identity theory maintains that people wish to be part of teams that enjoy positive and distinguishing identity. (Tajfel 1978; 1982.)

Although the perspective of social identity is not explicitly written into the project plan of IRIS, implicitly the objective to foster local communities and increase interaction between different groups aims at a positive collective identity. The active pedagogy approach of IRIS bases on the idea that local communities are engaged in the learning process. This means that learning is not only observed through credits, competencies and degrees university students receive during their studies but learning actions also support and benefit local communities. The active learning process is inclusive, recognizes the needs of communities and attempts to find solutions to challenges that real working life faces. The collaborative and active learning approach of IRIS invites different groups of society to operate close to each other, expands the mutual understanding between “us” and “them” and decreases separation in society. Interaction between working life and universities is not usual in Tanzania but quite the opposite, communication occasions and platforms are missing, and a variety of groups rather operate separately than in close partnerships. Business skills and entrepreneurship are learned mainly in theory and therefore graduate students often have only a limited level of practical business skills. Realistic income opportunities, however, are mainly in the private sector and in own business ideas which, require pragmatic planning skills and competence to start and run business in practice. Moreover, the gap between universities and working life has

not encouraged students to build networks during their studies and therefore after graduation their working life references are small. At the same time, micro-entrepreneurs would like to develop their business and update their skills, but they do not have enough resources. One of the major progress steps of IRIS happened when the team stepped out of TUDARCo campus and encountered the micro-entrepreneurs who run their own business in the neighbourhood. Finding out that micro-entrepreneurs have an amount of challenges that could be solved in collaboration with students diminished invisible fences between the local community and higher education.

Melting borders through access to information

Among the key areas for business growth is access to information. We may argue that information is one of the critical factors in the world and access to information is significant for all individuals, communities and societies, thus that each of them is able to learn and go forward. Official information refers to strategic, political and legal level guidelines produced by authorities. These high-level policies guide not only the public sector or NGOs but also private businesses and show entrepreneurs the direction the society should proceed to. Development and innovations depend largely on resources and networks, which are conducted through policies. For example, public finances can be directed to certain kinds of alliances so that they benefit common interest. Local authorities, in turn, supervise regional environments and they are aware of economic profiles, social structures and active operators in the area. There is no doubt that from a variety of perspectives, increasing the activity of entrepreneurs to develop their business is a positive issue and developing economy benefits all community members, one way or another. Without knowing the official guidelines, however, the risk increases that entrepreneurs are not aware of the possibilities and their efforts are not fruitful and do not meet common interests.

One important area of IRIS has been enabling local communities and micro-entrepreneurs to reach official information through libraries.



Picture: Markku Rajala and Getrude Ntulo at work.

The process started from mapping information services and through mapping, information services were typed, and their contents were identified, analyzed, located and eventually matched with entrepreneurs' needs, perceptions and preferences. In so doing, the gaps were identified and new services such as Entrepreneurs' Information Help Desk were designed to fulfil the needs and thereby improve not only entrepreneurs' but also entire communities' access to information.

Towards common understanding

Ways to work together and common understanding start to develop in the beginning of the project. Thus, the first steps require time and patience, especially in the case that partners come from different countries. Such is the case in the IRIS project, so before taking off, Finnish IRIS team members travelled to Tanzania to meet colleagues of TUDARCo to set team building. The kick-off meeting on 13th June 2017 was the concrete start of the activities of the project and a Finnish external evaluator was introduced and established in the project team. The project was noticed and the kick-off meeting was covered by several Tanzanian media, television channels and newspapers.

We may argue that the start of the project IRIS was excellent. The kick-off gathering was not only interaction between project members, but a number of stakeholders were included in the discussion. Collaboration with the **Commission for Science and Technology**



Picture: Sinyati Tira in a library.

(COSTECH), **School of Library, Archives and Documentation Studies (SLADS), Small Industrial Development Organization (SIDO), University of Dar es Slaam (UDSM), Tanzania Library Service Board (TLSB) and staff and students of TUDARCo** started practically on day one.

To be able to become successful, a project requires management-level support and their visible engagement to the goals. The Deputy Provost responsible for Academic Affairs at TUDARCo emphasized that the weak university-industry linkage requires attention and, in the future, active collaboration with working life is essential. In the context of IRIS, the community of micro-entrepreneurs is the linkage to industries and through this, the project is in line with the Tanzanian development agenda such as the Sustainable Development Goals (SDGs) 2030, Tanzania development vision 2025 and the National Strategy for Poverty Reduction. The IRIS project addressed this gap. The Vice Rector of TUAS, in turn, maintained that innovation pedagogy is a flexible tool that supports not only active teaching and learning processes but also networking with communities and working life. Rooting collaboration to curricula can ensure that universities are included in continuous interaction with working life and a link to industry is not optional.

The main objective of the IRIS project has been the capacity building of the partner institutions and empowering the surrounding communities through HEIs. These were reached by strengthening active pedagogical skills of teaching staff, enabling multidisciplinary cooperation, creating an inclusive communication environment

for HEI, community members, micro-entrepreneurs and organizations and encouraging all to innovation. However, in order to achieve the IRIS project goals, it was necessary to build strong teamwork. McEwan et al. (2017) refer to teamwork as a range of interactive and interdependent behavioural processes among team members that convert team inputs (e.g., member characteristics, organizational funding, team member composition) into outcomes (e.g., team performance, team member satisfaction). This definition was truly reflected in the IRIS project. Project IRIS organized into a Pedagogy team, Entrepreneurs team and Library and Information Services team. Each team had a clear connection to the three results curricula improvement, entrepreneurial skills and learning outcomes and improving access to official information. All areas were divided in clear parts that indicated the progress of the project. For example, curricula improvement was achieved by four steps: active pedagogy training, designing the new pedagogy model, piloting the new pedagogy model, and implementing new pedagogy to curricula.

The active project board has been of significant support in the implementation of the project. The board members from both partner countries represent higher education, research, micro-entrepreneurs, libraries and NGO's and their main role has been advisory. However, committed members have followed the project closely and participated in project activities.

Active pedagogy in practice

As planned, the TUDARCo IRIS team members attended an pedagogy training organized by the IRIS team of TUAS. The intention of the training was to offer an experience of the innovative pedagogical approaches and practices used at TUAS. The training introduced the concept of innovation pedagogy, activating learning and teaching methods, working life orientation and a variety of applications in practice for example, integration between studies and Research, Development and Innovation (RDI) activities. Apart from that, the flexible curricula of TUAS, which include a variety of elements such as a multidisciplinary approach, internationalization, entrepreneurship, versatile and development-oriented assessment, were covered. Specifically, the

training followed TUAS' Business Academy innovation pedagogy model. Through participatory and hand-on workshops, the TUDARCo IRIS team were in deep innovation pedagogy waters and they tested various active pedagogy methods in practice. The training changed the mind-set. Most lecturers in Tanzanian HEIs have received their education in a conventional, rather instructive or even behaviourist educational system (Lwoga, 2012). According to this system, the teacher is a guru and the role of students is to receive and store knowledge instead of actively processing or creating it. On the other hand, Konst & Scheinin (2018) assert that the task of a teacher is not to lecture but rather to support, encourage and guide to make lifelong learning happen and utilization of feedback possible. This is what was realized and learnt during the training.

Community approach

As mentioned above, active pedagogy includes the community members and working life operators in the learning process. In IRIS, one group of representatives of working life were micro-entrepreneurs who run their business near the TUDARCo campus. The project encountered 150 entrepreneurs, identified their needs and implemented selected needs to the new pedagogy pilots. Could we call this a kind of reverse innovation process? Small local needs are recognized, the most suitable of them are offered to students' teams to resolve them, and the result benefits learning and business and might be the seed for further development. As emphasized by Konst and Scheinin (2018), "education needs a change in direction, from traditional knowledge-based to mosaic-like competences". Not only that, but "teachers have a role to promote learning" (Konst & Scheinin 2018). In fact, this was done during the piloting of the new innovative elements. During the piloting sessions, teachers were able to promote learning by emphasizing the acquisition of competences (knowledge, skills, performance, and attitudes) and qualities which enabled students to self-evaluate during the learning sessions, using for example the Motorola approach as will be explained in the proceeding chapter.

Apart from piloting pedagogy, engagement of micro-entrepreneurs to the IRIS project and their motivation to continue interaction with



Picture: The indicator.

TUDARCo was high on the agenda. One example of this is a micro-entrepreneurs' breakfast event organized in April 2018 at TUDARCo. A number of entrepreneurs was invited and attended the event, which was also expected to expose students to the micro-entrepreneurs community. Moreover, the event offered students a chance to exploit not only entrepreneurial thinking and skills, but also to learn what kind of challenges real business faces. Androutsos and Brinia (2019) observe that through that process, students would acquire innovative, collaborative and co-creative skills and competences in an experimental and real-world way. In addition, the event offered participants an option to meet authorities and information providers such as Tanzania Bureau of Standards (TBS), Tanzania Foods and Drugs Authority (TFDA), financial institutions, COSTECH and SIDO. micro-entrepreneurs had a chance to hear an inspirational speech from one of the most influential motivational speakers in Tanzania, Eric Shigongo. He is an entrepreneur and a TUDARCo student pursuing a Bachelor of Arts degree in Mass Communication. His speech did not only change the mindsets of micro-

entrepreneurs but also of staff and students who were present. During the breakfast event, micro-entrepreneurs had a chance to showcase their works, sell some of it and network.

Discussions based on shared experiences and research was a much-used method in IRIS. For example, during the second pedagogy training in TUAS, head of Education and Research Jaana Kallio-Gerlander presented the big picture of university industrial cooperation whereas Dr Harri Jalonen focused on reverse innovation. Service design methods, in turn, were applied in a workshop that focused on library services. The workshop participants were librarians from public and academic libraries, information service specialists, and students and teachers in library and information studies. On purpose, the service design workshop was conducted at the venues of Tanzania National Central Library. The authentic environment and opening words of director of Tanzania Library Services Board, Dr Alli Mcharazo, encouraged library professionals to participate in the activity. Literature by Marquez and

Downey (2015) and Mager and Sung (2011) on service design reveals that service design should take a holistic, co-creative, and user-centred approach to understand customer behaviour for the creation or refining of services. On the other hand, Polaine and colleagues (2013) assert that services do not operate in a vacuum, but rather in tandem with other established services. It is through this lens that services are refined and improved or even created to meet user needs and expectations.

Deeper into active pedagogy

Androutsos and Brinia (2019) indicate that the UNESCO 2030 agenda highlights creativity, entrepreneurship and innovation as key enablers for sustainable development. However, in some HEIs' curricula, entrepreneurship education is not featured enough. Not only that, but also teaching methods and learning practices do not provide enough opportunities for students to be creative and innovative. According to Androutsos and Brinia (2019), there is a gap between real-world needs and education methods and practices regarding the current and future societal needs. As this gap was identified earlier in the text, it was necessary to organize advanced active pedagogy training to enrich active pedagogy skills. This training was organized in September 2018 in Finland and the main goal was to extend active pedagogy skills, not only through a variety of innovation pedagogy approaches, but also including the management level and department of Future Learning Design of TUAS in the discussion. The intention was to present a kind of holistic view thus that pedagogy thinking and development in the university requires commitment of all levels. In addition, the theoretical approach was included in the discussions and especially complexity thinking and theory of change. A more practical perspective was involved through event production, pitching and communication trainings.

The IRIS team visited a variety of environments, such as the Firma at TUAS. The Firma is a student-run company performing ICT-related projects like website design, graphic design, mobile applications and games as a part of their study assignments. Students with rather minimal supervision complete the study projects. However, the Firma is most of all a learning environment so it provides safe conditions for students to

test and make mistakes before they enter real-life companies. According to Kettunen, Kairisto-Mertanen and Penttilä (2013), "problems are solved and innovations are created in groups and networks in working life". Apart from that, the authors continue by noting that "group-based learning is superior in comparison with individual learning for relatively complex problem-solving tasks". It is on this basis that students at the Firma learn by doing in groups and network with working life. It was noted that it is better to fail at the Firma than to fail in a real company. Androutsos and Brinia (2019) observe that in order to foster entrepreneurship, young adults and future innovative entrepreneurs should not be limited by fear of failure.

Another practical learning environment is the Citizen's Helpdesk where ICT students from Turku University of Applied Sciences help people with their IT problems and learn important skills such as customer service and ICT-related problem solving. Connecting students with working life while they are pursuing their studies at the university of applied sciences is crucial. Kettunen, Kairisto-Mertanen and Penttilä (2013) note that "learning in one type of setting (university setting) is not accessible when the learner is moved to another setting (working life)". Based on these facts Kettunen, Kairisto-Mertanen and Penttilä (2013) advise to create education systems that provide room for students to practice what they learn at the university of applied sciences and working life.

An invitation to the IRIS team to visit Paulig venues offered a concrete experience how industry-university linkage works. Finnish Paulig is an international company in the food industry and one of the main products of Paulig is coffee. The coffee roastery imports coffee beans from Tanzania among other countries. The International Coffee Partner (ICP) project is practical work among coffee-growers operating in the Mbeya and Mbozi regions in Tanzania. The goal of the partnership is to enhance coffee-growers' skills and business, and to support their families' lives. Paulig gave IRIS an assignment to assess the perception of the beneficiaries of International Coffee Partner (ICP) programme in Tanzania and particularly case of Kilimanjaro. The assignment was significant step for the project, and it challenged the IRIS team to combine all elements of active pedagogy.

Presentation of the new model

Androutsos and Brinia (2019) indicate that “innovation, collaboration, and co-creation” are the skills of the 21st century and the new active innovation pedagogy model of TUDARCo was designed through these mentioned skills. The interactive process of the IRIS team, students, micro-entrepreneurs and library professionals was co-creation in practice. The OECD (2019) observes that collaboration, digital tools, and the interaction with users are the key competences for the youth, young adults, and the human capital of the economy.

The IRIS project plan presents an innovation event called Tanzanian Innovation Pedagogy Event (TIPE) that was finally organized in March 2019 during the Dar es Salaam Innovation Week. The innovation week concentrates on social innovations and it is organized by the Human Development Innovation Fund (HDIF). The selection process picks the innovative ideas and presentations that are presented to the audience during the week, which was titled *Scaling and Sustaining Innovation for human development*. The innovation pedagogy model completed in the project IRIS was named the FinTan Pedagogy Model and FinTan was successfully selected to the innovation week. The IRIS workshop and stand *Scaling and sustaining innovations in education* gathered a wide range of stakeholders; private and public sector, NGOs, authorities, micro-entrepreneurs, university staff and students. At the COSTECH venues, the model was presented and shared to a large audience in a showcase planned by TUDARCo students. The academic side event was arranged at the Tanzania Central National Library and it particularly inspired university teachers and students and library professionals but besides some micro-entrepreneurs wanted to hear presentations and participate in discussions.

Some outcomes

One significant outcome of the IRIS Project was inclusion of the FinTan Pedagogy Model to the new courses designed in the curriculum of TUDARCo. As a matter of procedures, the curriculum was presented to TUDARCo academic organs and approved and later submitted to Tanzania Commission for Universities (TCU) for validation and approval. In May 2019, the curriculum was accredited by TCU.

Another significant outcome was interaction with micro-entrepreneurs. A total of 120 micro-entrepreneurs were mapped and later 70 of them continued fruitful communication with TUDARCo.

Moreover, an information help desk was planned and implemented to support access to official information among micro-entrepreneurs. Concretely entrepreneurs' information help desk is situated on the TUDARCo campus and it is run by the university library staff and students.

Furthermore, in the HDIF innovation week, IRIS managed to share the FinTan Innovation Pedagogy Model with other HEIs and created new connections with companies. A good example is an agreement between ESS Creative and Legal foundation and TUDARCo of student assignments.

Conclusion

With this report book of IRIS, it has been realized that producing competent and knowledgeable graduates is a prerequisite to any university. As noted by Kettunen, Kairisto-Mertanen and Penttilä (2013), innovation competencies (knowledge, skills and attitude) are “learning outcomes needed for the innovation activities to be successful”. In fact, methods used in teaching and learning practices matter a lot and how teachers and students interact constitute a base for learning and thus enable the forming of innovation competencies. The current Tanzania National Development Policy and strategies to alleviate poverty and the ambition to become a middle-industrialized country will not be fulfilled if universities do not address community needs. Innovation pedagogy, which facilitates the university-industrial linkage to solve community needs and working life demands, can be a solution. By adopting the FinTan innovation pedagogy model, universities will not only be the pioneers of change and early adopters but will also be a unique university which produces unique graduates who are competent, knowledgeable, full of practical skills and capable of competing in the labour market and creating new employments to others. The HEI's management, teaching staff and students need to embrace the change and be flexible enough to influence the changes.



IRIS

Picture: Paula Ailio and
Gideon Enock walking.

References

- » Androutsos, A. & Brinia, V. (2019). Developing and Piloting a Pedagogy for Teaching Innovation, Collaboration, and Co-Creation in Secondary Education Based on Design Thinking, Digital Transformation, and Entrepreneurship
- » Kettunen, J., Kairisto-Mertanen, L. & Penttilä, T. (2013) Innovation pedagogy and desired learning outcomes in higher education
- » Konst, T. & Scheinin, M. (2018). The changing world has implications on the higher education and the teaching profession *On the Horizon*, Vol. 26 Issue: 1, pp. 1–8, <https://doi.org/10.1108/OTH-02-2017-0008>
- » Lwoga, T. (2012). Making Web 2.0 technologies work for higher learning institutions in Africa. *Campus – Wide Information Systems*, 29 (2) 90–107.
- » Mager, B., & Sung, T.-J. (2011). Special issue editorial: Designing for services. *International Journal of Design*, 5(2), 1–3.
- » Marquez, J., & Downey, A., (2015). Service Design: An Introduction to a Holistic Assessment Methodology of Library Services. *Weave Journal for Library User Experience*. Michigan Publishing. Volume 1, Issue 2, 2015. DOI: <http://dx.doi.org/10.3998/weave.12535642.0001.201>
- » McEwan, D., Ruissen, G., Eys M., Zumbo, B., Beauchamp, M. (2017). The Effectiveness of Teamwork Training on Teamwork Behaviors and Team Performance: A Systematic Review and Meta-Analysis of Controlled Interventions
- » Mor Barak, M.E. (2017). *Managing Diversity. Toward a Globally Inclusive Workplace*. Fourth Edition. Thousand Oaks, CA: SAGE Publications.
- » Polaine, A., Løvlie, L., & Reason, B. (2013). *Service design: from insight to implementation*. Brooklyn, NY: Rosenfeld Media.
- » OECD (2005). *The Definition and Selection of Key Competences, (DeSeCo)*. Available online: <https://www.oecd.org/pisa/35070367.pdf> (accessed on 10 August, 2019).
- » Tajfel, H. (1974). Social identity and intergroup behaviour. *Social Science Information*, 13, 65–93.
- » Tajfel, H. (1978). Social categorization, social identity and social comparison. In Tajfel, H. (ed.) *Differentiation Between Social Groups. Studies in the Social Psychology of Intergroup Relations*, 61–76. London: Academic Press.
- » Tajfel, H. (1981). *Human Groups and Social Categories*. Cambridge University Press, Cambridge.
- » Tajfel, H. (1982). Social psychology de intergroup relations. *Annual review of psychology*, 33, 1–39.
- » Tajfel, H. & Turner, J. C. (1979). An integrative theory of inter-group conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of inter-group relations*, 33–47. Monterey, CA: Brooks/Cole.