Chapter 11
A Human-Centric Co-creation Platform for Solving Wicked Social Challenges

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Abstract This article introduces DiakHub, a co-creation platform developed on a quadruple helix framework. DiakHub's innovation activities aim at leading to more functional human-centred service systems and service processes. Human-centric solutions are sought to address problems across governance and administrative silos and boundaries, particularly targeted at the most vulnerable joint service users with complex needs and multiple service agency use. As a University of Applied Sciences, Diak has a unique profile in the Finnish education sector. Its RDI activities focus on improving the wellbeing of those in the most vulnerable positions through co-creating societal innovations, services, and capacity building. DiakHub activity can be verified through co-creation RDI activities and public service innovations. The role of students is central; while engaged in DiakHub activities, they become co-designers and experts, participating in the teaching and RDI activities they are exposed to during their studies.

Keywords Co-creation · Ecosystem · Complex wicked social challenges · Public sector innovation · Quadruple helix

Key Points of the Chapter Are the Following

- It is possible to reform HEI's RDI with a design-led approach.
- It is possible to respond to complex social problems with RDI work.
- Quadruple- helix framework enforces the social innovations' development of HEI's.

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- High-level applied research supplements social innovations in QH process.
- Combining traditional academic work and business-like way of working may be a fruitful type of developing social innovations.
- Longitudinal data is needed to evaluate the effects of QH type of working processes.

1 Introduction

Over the recent years, there has been a rising demand from society towards higher education institutions (HEIs) to contribute to the development of society through various innovation activities (e.g., Dobers & Stier, 2018). Additionally, the more and more complex societal problems ask for these institutions to come up with new ways of knowledge production. In this article the research introduces DiakHub, a co-creation platform that was developed based on a quadruple helix framework. DiakHub's innovation activities aim at leading to more functional human-centred service systems and service processes. As one of the Diaconia University of Applied Scienes (Diak) key strategic operations, DiakHub is based on the broad and long-term expertise in research, development, and innovations (RDI) resulting evidence-based metrics, methodologies, and concepts. Human-centric solutions are sought to address problems across governance and administrative silos and boundaries, particularly targeted at the most vulnerable joint service users with complex needs and multiple service agency use.

Following aims of the Cost Action 18236 Multi-Disciplinary Innovation for Social Change (n.d.) our article illustrates how HEI's:

1. can respond to complex social problems with a design-led approach and support positive social change, and
2. can actively develop social innovations within a quadruple-helix framework (academia, private and public sector institutions, and end-users).

In Finland universities of applied sciences are mainly multidisciplinary and regional higher education institutions whose activities highlight their connection to working life and regional development. According to the Universities of Applied Sciences Act (932/ 2014) they offer pragmatic education that responds to working life needs. The main emphasis of research, development, and innovation at universities of applied sciences is on applied research and development that serve education in universities of applied sciences, promote industry, business and regional development, and regenerate the industrial structure of the region and promote lifelong learning. In carrying out its mission, each university of applied sciences shall cooperate with business and industry and other sectors of the labour market, within its own region.

Despite being a University of Applied Sciences, Diak has a unique profile in the Finnish education sector in three respects. First, its national, not merely regional, work to educate future professionals; secondly, its particular combination of study

fields and programmes; and thirdly, its strategic aim to focus its RDI activities on improving the wellbeing of those in the most vulnerable positions through co-creating societal innovations, services, and capacity building. There exists a number of literature (e.g. Arnkil et al., 2010; Heikkanen & Österberg, 2012), concerning various quadruple helix innovation platforms, but due to the unique profile that Diak has in Finnish higher education sector, the paper claims that a particular attention needs to be put on the following aspects when designing a social innovation platform in this respect:

- Potential to scale nationally
- Understanding of the diverse regions and environments
- Understanding of the diverse nature of the most vulnerable people
- Networks with social enterprises and civil society

In this article the research argues that quadruple helix framework, having co-creation in the core of the shared events of actors, may benefit the capacity to produce innovations of higher education institutions. The structure of this article is as follows: first, the research discuss why it is important to establish a social innovation platform with a co-creative approach and how it is related to the wicked social problems and quadruple helix framework; second, the paper introduce a case, Zekki, as a result of the utilisation of the platform; third, there is a discussion of the problematic nature of measuring social innovation and the potential of DiakHub as a partially commercial platform. Finally, the article concludes by stating that there is still a need for further studies of the use of quadruple-helix framework in HEI's innovation ecosystems.

2 Quadruple Helix Framework for Co-solving Complex Social Problems

Complex social and health policy problems are commonly known as wicked social problems in public welfare, health, and employment services. Wicked social problems are unable to be successfully tackled with traditional linear, analytical approaches, where individual initiatives focus on one or a few root causes, or by replicating initiatives that have been developed in other contexts. To address wicked social problems and accelerate public sector innovations, social and health care organizations need co-creative and co-design tools that focus on the following: enabling public sector organizations to take coherent action; building the adaptive capacity of public sector organizations; and assisting public sector organizations in creating the enabling conditions required for this type of approach. (Raisio et al., 2018; Peters, 2017).

Multi-layered and splintered system has become a problem not only for the most vulnerable service users with complex problems and multiple needs, but also for public sector services management and administration. The fragmented system and

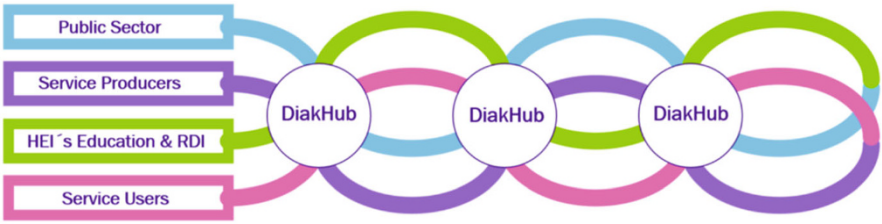

Fig. 11.1 DiakHub's Quadruple-Helix framework for HEI-led Public Social Innovation System

its multi-layered supervision and management cannot ensure continuity for the service users. (Määttä, 2012, 2015, 2016) Co-creation and its variants have been seen as an answer to such challenges of the welfare to produce more cohesion and social innovation to the complex system (i.e., Tuurnas, 2016). Co-creation can be understood as the varying ways in which the users of the service, often "citizens", or "customers" are engaged in the design of the service (Brandsen et al., 2018). Co-creation practice brings together the necessary stakeholders whose participation is important in relation to the development of the service. Thus, following the quadruple helix framework, co-creation happens when the actors come together in different situations to bring their own expertise or knowledge to the development of the service.

Instead of being tangible, wicked social problems could be defined as complex, unpredictable, open ended or intractable. Wicked social problems are generally seen as associated with multiple interests and values of stakeholders, the context of interorganizational cooperation and multilevel governance and fragmentation and gaps in reliable knowledge (Head & Alford, 2015, p. 711, 716.)

Wicked social problems are multidimensional because they are connected broadly to the service system. Homelessness, mental health and substance abuse problems, child protection and long-term unemployment are examples of complex social problems. They are not able to be solved by a single profession. In addition to the fact that the clients are in a vulnerable situation, multiple and simultaneous support and assistance needs constitute a challenge for professionals and for a whole service system. Aiming to resolve intertwined situations of client groups, solutions should be comprehensive and inclusive. Tackling wicked social problems calls for specific tools, such as systemic thinking, collaboration, and coordination, as well as adaptive and collaborative leadership roles of public leaders and managers (Head & Alford, 2015, p. 724; Rittel & Webber, 1973, p. 167).

Systemic approach requires client centeredness and involvement of all relevant stakeholders; professionals and managers from public, private and third sector as well as researchers and developers. (Head & Alford, 2015, p. 23.) Broad collaboration is needed, therefore it should be planned, supported, and implemented carefully. The Quadruple Helix Framework (Fig. 11.1.) depicts a joint effort of the state/government, academia/university, industry/business and public/civil society to come together in a participatory domain to create and govern social innovation

(Arnkil et al., 2010). It has been thoroughly tested and reported for instance in the In For Care Project in Sweden, offering methods and tools for implementing the framework in the context of health care services.

Bellandi et al. (2021) have handled social innovation governance and the role of universities throughout quadruple helix partnerships in Italy. They suggest that universities may have various roles in projects that utilise quadruple helix framework: knowledge providers, but also as mediators that can act between different fields, interests and agendas and support a diversity of actors (ibid., p. 8). The capacity to take different roles in different cases and partnerships can be one success factor for a HEI to accelerate social innovation (ibid., p. 5). Social innovation can be seen as a broadening concept of service innovation that includes social change by social action (Windrum et al., 2016).

Dobers and Stier (2018), pp. 63–64) have listed recommendations for organisations that work with quadruple helix collaboration and co-creation in social sciences and humanities fields. The research has divided them in four categories: management, involvement, communication, and tools and spaces (Table 11.1). As visible in the table, recommendations for communication are the most, as well as the category of involvement.

The current research of quadruple-helix partnerships as the founding power of learning platforms in HEIs has not been widely studied yet, but several examples show the potential of these systematic co-creation activities by HEIs. In this article the research presents the DiakHub concept as a concrete example of such platforms and introduce a way to establish such activity in practice, by opening a development case of Zekki—a youth-centred digital service.

3 Data and Methods

This research was conducted applying collaborative autoethnography (CAE) (Chang et al., 2012) by the researchers of this article and the development team of DiakHub. Collaborative autoethnography has its roots in autoethnography (AE), creating a richer pool of data through various methods of data gathering (Roy & Uekusa, 2020, p. 387). It has its limitations, and has been criticized by its "non-accountability, non-generalizability and non-representativeness" (ibid., p. 388), but was a fit method for this study, as "dialogue among the team is reflective of shared experiences on a topic. . ." (ibid., p. 387), and the study is focused on the creation process and piloting of the DiakHub. The data in this article consists of the documents about DiakHub prepared by the development group and the wider group, notes of meetings and self-assessments carried out, as well as interviewing each other.

DiakHub's development team consisted of four Ph.D. level professionals with a long career in University of Applied Sciences RDI activities. The group was supported by several professionals with a strong connection and understanding of the University's pedagogical practices and the organization of teaching up to the planning and implementation of curriculum. DiakHub was co-developed among key

Table 11.1 Collaboration and co-creation within quadruple-helix

Management	Involvement	Communication	Tools and spaces
Top management must commit itself to collaboration. It should be part of the organisation's long-term planning, and 'seed money' and personnel should be set aside for the work that needs to be done.	To ensure commitment to the collaboration, all stakeholders should be engaged right from the initial phase of the project. Involving them in defining the common task at hand will decrease the likelihood of misunderstanding, convince them of the benefits, make them accepting of the investment needed, and help avoid divergent expectations and friction as the collaboration progresses.	In many cases, other fields have a head start when it comes to impact-driven co-creation. Therefore, produce an arsenal of good-practice examples and arguments for the value and potential of SSH research without risk of being put in a defensive position. SSH is essential when it comes to addressing the so-called great challenges of our time.	Develop tools to learn from success stories and good-practice examples (i.e. models of systemic organisational learning)—So that they are transferable to planned or existing collaboration.
	Interact frequently with your partners, be receptive to them and nurture your relationships with them.	Make differences (and similarities) in terminology, language and communication visible.	Provide platforms and spaces for interaction.
	Make use of facilitators and translators, and intermediaries to optimise collaboration.	Address and challenge mutual stereotypes as early as possible. Also, think beyond dichotomies—e.g. academics-non-academics, industry-government—And work actively and systematically with attitude change by, for example, de-dramatizing academia and counteracting perceived status differences.	
		Discuss the foreseeable outcomes and impacts at the very outset of collaboration. Make sure they can be documented and assessed.	

(continued)

Table 11.1 (continued)

Management	Involvement	Communication	Tools and spaces
		Clarify each other's roles and views on professional integrity, and on the potential benefits and risks of collaboration, while giving credit to the individuals involved for their efforts.	
Management	**Involvement**	**Communication**	**Tools and spaces**

actors within the organization and the concept creation process was facilitated by a service design professional outside of the academia.

The development team held regular meetings every two weeks from the beginning of year 2020. In the initial phase, broad lines of action were created in relation to the strategy, followed by the structuring of the concept and, thirdly, the connections to practical activities. Short memos and conceptual outlines of the meetings were prepared and presentations to outsiders were stored in a separate folder. From time to time, the group evaluated the direction of its own progress.

At the beginning of 2021, the group reflected on its own activities by assessing the degree to which the goals set for the activities were achieved using the so-called traffic light model. The targets (42) were selected from the first action plan. The goals included larger and smaller entities. Of the objectives, 16 were assessed as making good progress (green), 19 as having made sufficient progress (yellow) and 7 as being in the start-up phase (red). The final evaluation of the process was conducted as collaborative autoethnography discussions as the working action researchers started to plan an article together.

4 DiakHub: Co-Creative Solutions for Vulnerable Groups

In this section, the research introduces the DiakHub concept and its primary functions in the Finnish higher education field. In the RDI sector, Diak works with its partners to promote the sustainable wellbeing of the most vulnerable groups in society within national, European, and global contexts by improving social and health care service systems by bringing focus to the service user perspective. A community development and co-creation approach is applied both in Diak's education and RDI activities. Diak's strengths include close contacts with a nationwide professional network, and this allows Diak to combine theory and practice in innovative ways, bringing research results from the grass roots level to the level of decision making.

DiakHub is part of Diak's RDI ecosystem, a new structural cooperation model. Cross-disciplinary knowledge creation and communication flow secures the

relevance of our RDI, and consequently, of the learning outcomes. This co-creative approach grounds scientific knowledge creation and experimentation in complex wicked societal challenges, experienced locally, regionally, nationally, and globally, applying the quadruple-helix and exploiting co-creation methods and tools. DiakHub's innovation activities aim to lead to more functional human-centred service systems and service processes. DiakHub activity can be verified through co-creation RDI activities and public service innovations. The role of students is central; while engaged in DiakHub activities, they become co-designers and experts, participating in the teaching and RDI activities they are exposed to during their studies. DiakHub is augmenting Diak's expertise so as to support public service innovation as well as building of social and health care and employment services capacity, diverse service producers (social enterprises, third sector and diaconia), and higher education institutions to better tackle wicked problems by creating human-centric systemic change via co-creation activities. Different continuity of care has been identified as one of the key components of human-centred service delivery. This ensures the satisfaction and confidence of service users. Continuity of treatment is compromised during various transitions. Often transitions occur between sectors and across organizational and professional boundaries. What is needed is a paradigm shift towards a more networked way of working. (Haggerty, 2003; Snowden, 2002.)

DiakHub assists public sector social and health care and employment services via its quadruple helix co-creation framework to address wicked problems. It does this by bringing different actors together with three RDI excellence co-creation tools. Different co-creation tools can support the design of the services, as well as organization strategies and building of networks. The use of such tools origin from service design thinking, such as service blueprint, and have been utilized as a strategic advantage for example already in the 2010s in the city of Helsinki in Finland (Jyrämä & Mattelmäki, 2015). These tools can be concrete game-like systems or facilitated processes, of which aim is to help a certain group of people to discuss, converse, create solutions and make decisions (Vaajakallio, 2012).

Co-creation tools support public social and health care and employment systems to re-combine existing organizations and resources in a manner that improves systemic functioning and collective effort, and these tools consider the different roles in enabling systemic human-centric change and public sector innovations. (Gouillart & Hallett, 2015). Diak's co-creation tools tackle the multi-causality and interdependencies of complex problems through (1) *Service Integration Design (SiD)* collaborative leadership tool for human-centric public social and health care; (2) *3X10D®* human service integration self-assessment tool; and (3) *Primary impacts* tool for evaluating the strengthening of human-centric inclusion and agency. SiD and 3X10D® tools are recognized and recommended tools for reforming social and health care services by the Finnish Institute for Health and Welfare. In this article the research present one example related to the 3X10D® tool and its development process, that was conducted within the DiakHub quadruple-helix framework.

Co-creation and coproduction are instances that enable talk, communication and shared knowledge-(co-)creation (see ie. Hannula, 2014, 2020; Lund Petersen, 2019;

Vaajakallio, 2012). The knowledge creating multidisciplinary and multi-actor teams within the DiakHub produce relevant content, solutions, and social innovations to contribute to development in respect of the identified wicked social challenges and phenomena. The new knowledge that is co-created in DiakHub is utilized in education development at all levels from BSc to post-graduate life-long learning education provision and diverse RDI activities.

5 DiakHub Activity in Practice: Co-Creating a Youth-Centred Digital Service Zekki

The case of the creation of Zekki–service depicts how the problem space occurred in the field came to the knowledge of Diak's specialists, and led to the start of a co-creation process, where different stakeholders were participating in the different phases of it. The co-creation process consisted of three iteration rounds: (1) Development of 3X10D survey, (2) Development of service paths, (3) Development of Zekki (see Fig. 11.2.). Each development round had five steps: (1) Shared vision creation, (2) Co-design, (3) Co-creation, 94) Testing and delivery, and (5) Evaluation (depicted in detail in Table 11.2.). The service development followed an iterative cycle, where the development of the service doesn't end with the first release but continues in interplay with different evaluation phases and feedback channels (Botero & Hyysalo, 2013).

3X10D® tool was launched to social and health care professionals in June 2020 as a part of nationwide digital social and health service platform omaolo.fi. While the 3X10D® was in professional use, new needs emerged which led to the next iteration process resulting in the Zekki, youth-centred digital service.

Table 11.2 depicts the iterations rounds in the case of Zekki, and what happened within each round. The focus of the Zekki project was in the creation of a service aimed at youth, as youth (15–24 years) is a critical transition period from

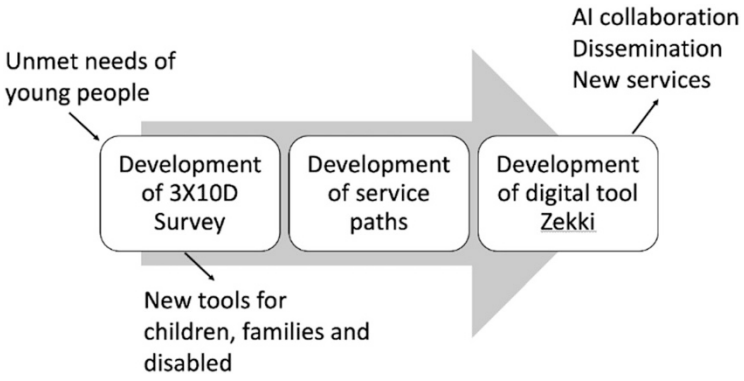

Fig. 11.2 A three-staged development process of youth-centred digital service

Table 11.2 Co-creation and quadruple helix in practice. The development process of Zekki—a youth-centred digital service

	Vision of the solution	**Co-design**	**Co-creation**	**Testing and the delivery**	**Evaluation**
Iteration 1					***3X10D survey***
The problem: Segregated services, various professionals, various methods.	All professionals should see the young person and his or her whole life and share the information.	Literature review; self-evaluation which utilizes information from Well-being theories.	A multi-dimensional self-evaluation with ten questions of different life aspects. Easy answering (0–10).	Piloting, testing in the school health system.	School health professionals as key actors, must be integrated into the school health system. New needs emerge.
Participating stakeholders	Diak's specialists School health professionals	Diak's specialists School health professionals	Diak's specialists School health professionals	Diak's specialists School health professionals Young citizens	Diak's specialists School health professionals
Iteration 2					***Service paths***
The problem: Young people do not get support they need	Further understanding of the needs of the young citizens	The entity of young peoples' life as a basis	Systematic structured focus group discussions with 3X10D. Evaluating current services.	Visualization of the needs and service paths, defining the major problems in current services.	The need for information of the support services and situation-targeted services
Participating stakeholders	Young people as key actors Diak's specialists	Diak's specialists Young experts by experience	Young experts by experience as interviewers, young people in different situations as informants Diak's specialists	Young experts by experience Diak's specialists	Young experts by experience Diak's specialists
Iteration 3					***Zekki—a youth-centred digital service***
The problem: Excellent services exist but young people do not	A young person has to be able to find support easily and at a one place	A youth-centred service which targets the	Digital workshops in co-creating the content of the service.	User-testing followed repeatedly the technical development.	Further improvements were made constantly

find the right support at the right time.	focusing on his/her own situation.	support for the current situation.			according to user-testing.
Participating stakeholders	Young people as key actors Diak's specialists	SE professionals Diak's specialists Service designer	SE professionals Diak's specialists Service designer Technical developer	Young citizens Diak's pupils SE professionals	Young citizens Diak's pupils SE professionals Technical developer Diak's specialists.
	Vision of the solution	**Co-design**	**Co-creation**	**Testing and the delivery**	**Evaluation**

adolescence to adulthood, which strongly affects the future well-being. Today, however, there is a large discrepancy between the young people's needs and the current services. This results from a multi-layered and complicated system, where multiple organisations act as providers. This kind of complicated system has become a problem for especially young people, and to most, those young people with multiple needs (Paananen et al., 2019). Segregated services and young people's various needs underlined the importance of developing new tools to combine the needs and the support more effectively.

The co-creation process of Zekki shows us, how a wide spectrum of people is needed in producing a satisfactory service, that answers to the needs of the users. The professionals from social enterprises (SE) and Diak, young citizens and Diak's pupils were involved more systematically and more comprehensively in the developing process, than before in the Diak's service delivery history. The co-creation process implements the DiakHub's quadruple-helix framework in practice. OECD's Observatory of Public Sector Innovation (OPSI) presented 3X10D® tool case study as a one of the best practices in public service innovations, and Zekki is currently a nationwide public digital service in Finland.

6 Discussion

As our study shows, building a more inclusive society and solving wicked social challenges calls for thoroughly redesigning the relationship between Diak as a higher education institution, the public sector, and diverse service producers and service users in accordance with co-creation principles. This implies building a structural institutional infrastructure linking Diak's teaching and RDI with public sector, diverse service producers and service users' perspectives and needs. It also includes making already existing connections visible, developing them into wider networks, and subsequently transforming them into systematic cooperation feeding into education, research, development, and innovation. Establishing structures for co-creative research and innovation is an iterative, experimental process.

Traditionally, development work in the Finnish HEI's is done through project activities. The amount of externally funded projects is one of the performance metrics (Universities of Applied Sciences Act 932/2014). In this case, the role of externally funded projects is emphasized. It often annoyingly means that project development work is interrupted until the project objectives towards the funder are met. Of course, projects are directed at best in line with the organization's strategy, but successive projects do not automatically cumulate the added value of the projects. The strategy and the themes it creates build the necessary framework conditions for linking individual projects together (Cooke-Davies et al., 2009). However, it is not enough to pursue a stronger accumulation and correction of scientific and practical knowledge (cf. scientific knowledge). The different Quadruple-Helix framework structures are a step towards organizationally integrating individual projects and measures into a broader development mission. DiakHub is an example of an organizational structure that also supports the strategic aims of the organization.

Different HEI's Quadruple-Helix framework activities as well as Hub's concept are approaching company-like innovative operations. The way of operating and the speed of launching new activities easily collide with the traditional way of operating in a university. There are often different time cycles in teaching and research and development. It is obvious that the university is not a service organization, but the outputs must be transferred to others. Therefore, one option to solve this conflict is for Hub to form business activities, for example start-ups, in which the university staff would be involved part-time. There is some literature already implying, that societal innovations also have an economic significance (see for instance Heiskala, 2007). Thus, the future possibilities for DiakHub could be in accelerating for instance social entrepreneurship (see Iqbal et al., 2018) within the quadruple helix partnerships.

Although, for example Windrum et al. (2016) claim that social innovation still lacks measurement tools and research related to it, which implies that more research is needed to be able to better claim the value of multi-actor co-creation for social innovation. Activities must have clearly defined objectives and be measured if the research want to assess the performance of operations. In many cases, Universities measure the points at which they receive funding. In Finland, these are indicators related to teaching and RDI work. Most of the funding comes to Universities of Applied Sciences from teaching-related issues. The issues measured in RDI projects are largely related to the work done in the projects and the resources obtained from them, and less to the results/impacts obtained by them. This is problematic when it comes to promoting impact and effectiveness of work done by the University. In the future, DiakHub's operations must be assessed based on the added value it provides to quadruple helix parties. This means creating and leveraging more advanced KPIs. In this case, for example, the dissemination and utilization of the innovations produced by DiakHub can be assessed ex post, both within the university (between teaching and RDI) and especially in working life and society at large. This creates a basis for assessing the relevance of the activity more broadly than describing how to do your own activities.

Dobers and Stier (2018, pp. 63–64) have emphasized the key elements of Hub operations, including the integration of operations into organizational activities, and enabling staff participation in Hub operations, as well as the ability of the parties to create direction of projects and maintain the interaction between actors. This requires shared concepts and language. In operations, roles and incentive systems must be clear and communication open. The new advanced products and methods that have emerged must be communicated in such a way that it strengthens cooperation. These good developments should be documented for good dissemination elsewhere and as a basis for new openings. As DiakHub promotes social entrepreneurship, and has its aim in scaling the concept, it is notable that different countries may interpret the concept differently due to different cultural values (Canestrino et al., 2020), meaning that the scalability of the concept needs to expand to cultural scalability, and consider other contextual elements too (Misbauddin & Nabi, 2019).

Based on the self-assessment, Diak has directed its special expertise and linked it to the strategic goals of the organization in establishing the DiakHub. Similarly,

research activities have been linked to development projects. During the DiakHub establishment work, previously separate service products were assembled into a new type of "product family". Within the organization, it was also possible to increase RDI work and teaching in master's studies and, to some extent, in BA studies through DiakHub. Diak has also familiarised itself with other quadruple-helix framework initiatives and similar kinds of operations in other universities, both nationally and globally. During the first year of operation, a plan was also made for the establishment of a new website, and this was implemented in March 2021 (see www.hub.diak.fi). The aim of the website is to build a dynamic platform on which students and other actors can interact with each other. Likewise, it enables active marketing and networking. In the nascent phase, there are various measures that require systematicity, such as contacts with courses and students more broadly, communication with other actors and topical seminars. Similarly, Hub's marketing within the organization needs to be clarified. International connections are also still in the start-up phase.

7 Conclusion

As the research stated in the introduction, our aim was to illustrate a way for HEI's to respond to complex social problems with a design-led approach, as well as show how HEI's can actively develop innovations within a quadruple- helix framework. The research did this by describing the concept of DiakHub, and presenting the case of Zekki service, and thus opening a co-creation process within the quadruple-helix framework. As the Diak's social innovation initiative DiakHub is still very recently established, more longitudinal data is needed to evaluate its nature and what positive aspects it brings to the strategic development of Diak's daily practice in the long run. Although, our article shows that based on the quadruple-helix framework and a design-led approach, it is possible to a HEI to establish a new kind of research and learning platform that promotes social innovation and the focus on most vulnerable citizens in a relatively short time span. In higher education, funding mostly comes from public funds, which means that operations are not as strongly dependent on income streams as in private (small) companies. More stable funding makes it possible to carry out various experiments.

On the one hand, universities have a key role to play in teaching and education that limits their activities, but on the other hand, it enables students to be integrated as a natural part of quadruple-helix framework -type development work. Diak as a university is not a service organization or service provider, but a partner that produces public information for others, facilitates and supports partners in various ways. Due to the nature of Finnish universities, it is possible for universities to develop social innovations without commercial goals. The research believes this will support the public sector in developing its operations more efficiently. The research encourages the researchers and actors in the field to actively develop and reflect on new social innovation platforms and bring them to practice for evaluation as the learning process whilst doing it itself is valuable.

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