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16. Educational Organizations as Co-Developers in the Helsinki Region

Abstract

Cooperation between education and the world of work is in a flux. Economic and societal pressures call for new types of cooperation and a transformation towards knowledge-producing communities. Educational institutions need to be more active in driving innovations and social development. These diverse innovative outputs to the regional economies demand going beyond traditional ways of collaboration.

Omnia (the Joint Authority of Education in the Espoo Region), Metropolia University of Applied Sciences, and Laurea University of Applied Sciences have piloted numerous projects that address the varying needs of regional innovation capability, youth employability, and entrepreneurial outlook.

This article presents cases of new types of knowledge-based cooperation that challenge the conventional roles of education, business and the public sector in the Helsinki Region. The results are very promising. It is possible to simultaneously advance educational goals, support entrepreneurial innovations, and create positive social impact. Attaining all of these goals demands changes in thinking, however. Instead of fixed expert roles, system participants must move towards acknowledging all expertise in its various forms. Conventional barriers in communication must be torn down. Education must move out of the campuses and into the real world and educators must become coaches and mediators rather than traditional lecturers.



KEYWORDS: Innovation pedagogy, Practice-based learning, Partnerships, Innovation co-creation

1. Introduction

The demands for new types of cooperation between educational institutes, businesses, and the public sector have been voiced already for some time. The economic and competitive pressures of our time specifically require new approaches in integrating education, research, and innovation. One needs to go outside of the box in order to find new solutions to youth unemployment, adaptation to structural changes in the economy, forecasting future skill requirements, and promoting innovations.

As a result, there is a demand for partnerships between education and the world of work. The Council of the European Union (2009) has made this explicit in a call for enhancing partnerships between vocational and higher education, employers and other parties. The aim of the cooperation is to guarantee that student competencies are aligned with the needs of future employers. Without the input of the employers, it is difficult to identify the **right** competences. This is particularly important in terms of European competitiveness in the current economic climate.

The call for cooperation relates also to the current discussion on fostering innovation. New kinds of joint efforts are needed to improve knowledge sharing and knowledge dissemination. Educational institutions possess vast bodies of knowledge, which should be put into use in fostering innovation and ensuring its transfer into practice (The Council of the European Union, 2009).

Cooperation between education and the world of work is particularly important in terms of promoting entrepreneurial capabilities. Entrepreneurial education has a positive connection to the inclination of becoming an entrepreneur. However, all pedagogies are not equal. Entrepreneurship is difficult to teach only based on theory—a link to actual practice is necessary. One way of ensuring authentic learning is through cooperation with real-life entrepreneurs. Still, the hurdles of cooperation may compound in the entrepreneurial context, where time is scarce and scarce resources considered critical (Kolvereid & Moen, 1997; Fiet, 2000; Mariotti & Glackin, 2014).

It appears that the conventional ways of thinking about education, research and innovation cannot respond to the requirement of closer cooperation between the parties of the Triple Helix. To enable new, out-of-the-box types of innovations and emerging entrepreneurial capabilities, there is a need for a new kind of *modus operandi*: one that breaks the silos separating the knowledge communities.

In this article, we present examples of innovative pedagogical approaches that also serve the purposes of the innovation ecosystem and regional development in general. The examples highlight the competences of three educational institutions. Helsinki Metropolia University of Applied Sciences, Finland's largest university of applied sciences, educates the professionals of tomorrow in the fields of culture, business, health care and social services, and technology. Metropolia has a variety of Degree Programmes for both daytime and evening studies. It provides 21 applied Master's degree programs in Finland. It has 16,800 students, 1,100 staff and 65

degree programmes—14 of them in English. In the Metropolia community, people and Helsinki Region companies and organizations meet to create insight, expertise and well-being for both work and life in general. Metropolia is a reliable partner and an innovator in higher education and with the surrounding region. Through co-operation, the ecosystem discovers new ideas and solutions to create better employment opportunities in the Helsinki region.

Omnia, the Joint Authority of Education in the Espoo Region is owned by the municipalities of Espoo, Kirkkonummi and Kauniainen. Today Omnia is a regional lifelong learning development center with over 40,000 students and over 850 staff. Omnia trains youth and adults, offering over 40 basic, further and specialist vocational qualifications and several informal courses. The Finnish National Board of Education has chosen Omnia as a center of excellence for upskilling both K-12 and vocational teachers and trainers at a national level. Omnia was awarded the Ministry of Education and Culture National Quality Award in 2013. As a development center, Omnia has close ties to social partners in the region. On campus, the growing network of entrepreneurs acts as an everyday inspiring role model that actively engages Omnia students, customers and staff in learning projects. Mobile technology has been harnessed to bridge the world of work and education, making it easier than ever to make all learning outcomes, formal, informal and non-formal, visible.

Laurea University of Applied Sciences focuses on producing new competences in service innovations and carries out professionally orientated education, regional development and R&D activities. Laurea operates in the Greater Helsinki Region, employs approximately 500 professionals and has 8,000 students, of which 1,200 in adult education programs. Laurea's curricula are built on its proprietary pedagogical model **Learning by Developing**, or LbD. LbD is a practice-oriented approach that relies on authentic working-life cooperation, learning projects, and student activity. The model offers the dual benefit of providing service to the region while also improving student employability. Largely due to students' improved meta-skills, post-degree employment is over 98%.

2. Integrating Education, Research and Innovation with Regional Development

Education institutions have a key position in leveraging the innovation agenda of the European Union. To ensure competitive advantage for the EU, research, development and innovation activities need to have a strong regional dimension. This regional development mission needs to be based on an understanding of innovation ecosystems (Committee of the Regions of the European Union, 2012; Markkula, 2013).

The EU is seeking global leadership in various societal issues, as outlined in the Horizon 2020 programme. Solving increasingly complex societal problems in difficult economic conditions requires novel and innovative approaches. The Committee of the Regions (2012, p. 3) calls for new partnerships to improve open innovation and

multidiscipline knowledge sharing: “The laboratories for innovation are no longer traditional university facilities, but regional innovation ecosystems operating as test-beds for rapid prototyping of many types of user-driven innovations: new products, services, processes, structures and systems, which need to be of transformative and scalable nature.”

The role of education institutions is crucial in the innovation agenda of the EU. What is needed from the educational sector, though, is a capability to transform into a new type of knowledge laboratory. Also, regional partner organizations need to find the commitment to the deeper and more integrated partnerships (Markkula, 2013).

These challenges highlight the larger societal change that demands new approaches to the Triple Helix. It seems that the role of education institutions is changing and this is seen in the institutions’ important role in the innovation system in terms of regional impact (Arbo & Benneworth, 2007).

An active Triple Helix ecosystem is a fundamental part of a larger regional innovation system. In the networked, global and digital knowledge economy, the Triple Helix is morphing into something different (Cooke & Leydesdorff, 2006). As Arbo and Benneworth note, “...it is expected that the knowledge institutions not only conduct education and research, but also play an active role in the development of their economic, social and cultural surroundings. In other words, they are entrusted with a regional mission” (2007, p. 9).

Part of the on-going transition relates to changing roles. Today’s challenges increasingly necessitate flexible, iterative, networked problem solving. As Gibbons et al. (1994) discuss, education needs to shift from the homogenous, science-based knowledge creation (**mode 1**) to a heterogeneous, practical and social process (**mode 2**). Mode 2 innovations demand open environments where all parties, regardless of their formal roles, can provide input. New knowledge is increasingly created in practical applications.

Changing roles, border-breaking innovations, and co-creation of new knowledge also imply that future learning needs and regional demands are no longer separate. Educational institutions have a critical role as providers of knowledge and innovation in the region (Redecker et al., 2010; Halonen, 2014). The challenge is to constantly equip teachers with up-to-date pedagogical know-how as teachers act as gate-keepers and facilitators in the joint innovation processes. Developing innovation pedagogies is the key in guaranteeing systematic growth of innovation competence in the region (Hero, 2014c).

Arbo and Benneworth (2007) suggest that education institutions are at a crossroads in the innovation space. Education has become strategically important for innovations. However, they simultaneously provide the crossroads through which different ecosystem actors and participants pass.

3. Innovation and Employment Synergies

It is nearly impossible to create accurate forecasts of the future requirements of innovation ecosystems. One way of counteracting uncertainty is to be proactive, creating flexibility and adaptive capability (Eyoang & Holladay, 2013). Proactivity is also related to the skills of creating new innovative solutions, seeing opportunities, handling unexpected situations, and communicating in boundary-spanning encounters. As a result, the demands for an innovation-pedagogical approach are becoming paramount (Siltala, 2010, Ayvisati et al.; 2013; Hero, 2014a).

In Finland, vocational institutes and universities of applied sciences typically have close ties with local economies. As a result, they have the capability to actively impact local businesses, which in turn have a direct link to employing the youth in the area. One way of approaching this is to acknowledge that education institutions working with young adults have a responsibility to advance the professional growth of a new generation; one that can employ appropriate meta-skills, including communication, collaboration, creativity, and adaptability. It is only through systematic development of the right competences that an innovative inclination and innovation capabilities can be ensured.

A key task for education regionally is to advance employability. In difficult economic circumstances it is typically even more challenging for young professionals to enter the world of work. In Finland, the Government Programme includes implementation of a social guarantee for young people. The programme requires that everyone under 25 years and every recent graduate under 30 years be offered work, a traineeship, a study or, workshop place or labour market rehabilitation within three months of becoming unemployed. Education institutions can have a key position in leveraging the creative potential of these young adults towards the growth and innovation capital of local industries.

Education institutions have an opportunity to participate in employment advancement in multiple novel ways with municipalities. There are still some hurdles on the road, however. Siltala (2010) claims that one complication stems from the role of the teacher. We need to empower and facilitate the change of traditional, authority-based teachership towards a productive, innovative customer service profession. According to innovation pedagogy, students' new meta-skills and attitudes are vital in improving innovation capital. Regional competitiveness improves through multidisciplinary, multi-actor environments that nurture developmental agendas.

Through acknowledging the shared regional agenda, we are also taking a step towards closer communities of knowledge creation. As a result, the type of cooperation in education, research and innovation activities changes. In Wenger's (2011) terminology, we are moving towards knowledge-sharing communities. In new types of cooperation between education and the world of work, practical learning opportunities, life-long learning, authentic learning occasions, and concrete outputs for work organizations can all be achieved.

These knowledge communities also have other benefits for the participants. The community supports the participant organizations in developing future capabilities. It can support professional skill growth, promote sharing of best practices, improve recruitment activities, and facilitate leveraging strategic plans (Wenger & Snyder, 2000). All of these have a crucial link to innovation capability.

The demand for knowledge communities crossing organizational boundaries is present in education institutions as well. In the Helsinki region, new types of knowledge communities have been piloted in response to the demands. In these different projects, learning pilots, training and operation models, and new experiences have been collected. The key findings relate to:

- 1) multidisciplinary and multi-actor cooperation, where students as well as researchers and teachers are all learners,
- 2) crossing the boundaries between education and the world of work through joint activities and common languages, and
- 3) crossing the boundaries between educational levels through joint spaces, transitions, teacher skill sharing, and gamification.

In the following section, we discuss the findings from four case examples.

4. Case Studies

4.1 Case 1: Nurturing innovation potential and youth employment

Takeaway: Improving innovativeness and employability can go hand in hand

The TeiniMinno (TeenMinno) project is an innovative idea addressing the difficult situation that many young people face. When jobs are cut, it is becoming very hard for the youth to enter the world of work. The Finnish Government's social guarantee programme ensures education and training opportunities for this target group. The central idea of the TeiniMinno project is to harness the innovation potential in these young people to advance the innovation and development activities of businesses.

One part of the programme seeks ways to leverage innovation pedagogy into improving the innovation competences of young people. Innovation potential can be a crucial skill set when students are in a transition between vocational secondary education and higher education (Hero, 2014b). Although the potential for employment and further education is present at this stage, the danger of unemployment is also very concrete.

The project brings together students in vocational secondary education and higher education and lets them solve innovation challenges induced by work organizations. While producing new, innovative ideas and solutions, simultaneously, new career paths are being created. The young participants receive diplomas for their

work and gain important work contacts. As a result, the project can serve as one way of implementing the compulsory social guarantee with an innovative output. Students' social skills, project skills, problem solving skills, teamwork skills and innovation potential improve during the innovation process.

TeiniMinno is an ESR-funded project coordinated by the Uusimaa Centre for Economic Development, Transport and the Environment. The participants include Omnia, Metropolia, Espoo Liberal Adult Education Centre, The City of Espoo and a number of business participants in the Espoo region.

4.2 Case 2: Vocational institute as an innovative entrepreneurship accelerator:

Takeaway: Bringing entrepreneurs, students and educators in shared spaces improves innovative results for all.

InnoOmnia is the development unit of Omnia, the Joint Authority of Education in the Espoo Region. InnoOmnia was founded to enable flexible experimentation with boundary crossing between educational fields and the world of work. Today, it is a knowledge community inside a VET organization where teachers, students and entrepreneurs learn and innovate together and even share the same coffee pot. All of the spaces on the premises can be learning spaces and every participant can serve as a learner and a teacher.

InnoOmnia's main purpose is to bring together entrepreneurship, vocational education and various development programmes. These development programmes pilot different aspects of 21st century vocational learning, such as real-world skill-based learning, mobile technology and cloud-based learning solutions, and learning through entrepreneurial projects.

In InnoOmnia, entrepreneurs co-reside with the Omnia staff and students. The community develops new forms of co-operation on a daily basis. Also, the new viewpoints and approaches that arise in the dialogue support new innovations and business ideas. Everyday life in InnoOmnia is about innovation. The typical entrepreneur is an innovator or a creative craftsperson, constantly seeking new insights and ideas.

For starting businesses, InnoOmnia offers services similar to what a business incubator provides. Interested entrepreneurs can apply for a position in the community. There are multiple options for participating, including a tailored package of office decisions and a professional development plan. An opportunity to participate in the Omnia Adult Education Further Qualification Programme for Entrepreneurship is optional for the entrepreneurs.

VET education on business and entrepreneurship has moved into shared spaces with entrepreneurs. Hence, students' studies are integrated with the entrepreneurs' authentic challenges and leveraged to creating innovations. The teacher is no longer the only source of information. Information flows in all directions. A teacher becomes a tutor and guide, when there are multiple experts working on a problem.

4.3 Case 3: Empowering entrepreneurship through gamification

Takeaway: Gamification can support innovativeness in a knowledge community

In the LOL project, a business perspective, an entrepreneurial perspective, a pedagogical perspective and a social media perspective were brought together in an innovative knowledge community (Ylikoski & Oksanen-Ylikoski, 2014). The main finding in the project was that gamification can be employed as a tool in breaking down conventional silos.

The project was a game played in an online community of entrepreneurs, students and teachers. It featured an online game board and online rooms for preparing for game tasks. Pedagogically, it was designed to support learning on three educational levels.

In terms of innovation, the purpose was to let students work on real business problems and create creative solutions to them. Entrepreneurs offered their skills and knowledge for the community's use.

The game tasks focused on entrepreneurial day-to-day issues. This offered a dual benefit: it supported students' business studies through an opportunity to solve real entrepreneurs' authentic problems. For the entrepreneurs, the results provided new insights and solutions into business problems. The game lives on, having evolved into a pedagogical solution that InnoOmnia actively promotes.

The project was funded by the Uusimaa Regional Council (Finland), as part of the European Regional Development Fund Program. Participants were InnoOmnia, the Kasavuori Secondary School of Kauniainen and Laurea University of Applied Sciences.

4.4 Case 4: Mobilizing a higher education institution

Takeaway: Taking education out into the world supports authentic learning and fosters innovation potential

Laurea University of Applied Sciences operates in the Uusimaa region, a geographically diverse and wide area. It is impossible to be present in all parts of a region spanning hundreds of kilometres only by conventional means. For this purpose, Laurea has innovated an operative process that can simultaneously address specific local needs, improve innovation capabilities, and offer authentic learning opportunities.

In Laurea, studying revolves around projects originating in the world of work. These projects are adopted as problem-solving and development tasks, for which students develop new practices. This helps build new knowledge in the subject matter (e.g. marketing) as well as important meta-skills (e.g. team work). Teachers and staff moderate the requests from the region and translate them into learning opportunities.

Because of the great distances in its operating region, Laurea cannot be present in campuses everywhere. However, the pedagogical approach makes it possible to

create pop-up spaces around the Uusimaa region. There are multiple examples of e.g. seminar tours for novice entrepreneurs, counselling desks inside shopping centres, and rehabilitation assistance stands inside health care centres. These share the common features of a road show, where all the associated materials and artefacts can easily be transported to another venue (Ylikoski & Kivelä, forthcoming).

These pop-up spaces can be mobilised with little effort and operated as student learning projects. The concrete benefits are apparent: students have more opportunities to engage in dialogue with the real world and simultaneously create new insight, ideas and innovations to serve the needs of the local communities and businesses. In a way, putting Laurea's capabilities on wheels makes it accessible to the entire region. By taking learning out of the classroom, Laurea is piloting a way of improving mobility and closeness at the same time.

5. Reflection: Towards Partnership Thinking

This article showcases examples of multilevel and multi-actor cooperation bringing together education, research and innovation activities. By challenging conventional actor roles, it is possible to attain multiple goals in parallel. In the cases presented above, educational goals, entrepreneurial innovations, and positive social goals have been reached through cooperation and collaboration. These examples show that it is possible for education organizations to transform and regional partners to become committed (cf. Markkula, 2013).

Based on the cases, it appears that shared knowledge communities that gather together different educational levels, businesses and public organizations can serve as a strong basis for regional innovation ecosystems. In fact, it is possible that the type of flexible silo-breaking cooperation, as described in this article, may function as a trailblazer for more entrepreneurial attitudes and the entire regional culture.

The first finding arising from the cases relates to sharing knowledge and competence among all of the experts in a given field, irrespective of where these experts are situated. This type of shared asset helps improve education, research and innovation activities; it helps improve the level and quality of regional impact, and speed up the dissemination of new insights.

Another observation relates to the breaking of boundaries. Taking students outside of the safe boundaries of the education institution and taking them inside the world of work helps develop the meta-skills crucial at work. It also produces new insights into and viewpoints to learning, and helps refocus the attention to real, authentic development opportunities. In the best examples, real open challenges from the world of work, multidisciplinary, practical project-based learning, gamification and networking simultaneously improve innovativeness and the joy of learning. An intentional innovation process provides an optimal learning platform.

Tearing down communication barriers is a key facilitator in co-creation and learning. There are positive examples of service integrators who help turn a practical, work-based problem into a learning project, then collect the appropriate skills and

talent needed for solving the task—all the while avoiding the complex language and communication typical of the educational realm.

To some, a recent piece of shocking news has been the revelation that students can learn without the presence of the teacher. This trend has been emphasized by systematic attention to acknowledging everyday learning and previous capabilities. Also, the digitalisation of knowledge and the availability of information accentuate this development. This has a tremendous impact on the role of the teacher. The teacher becomes a facilitator of business deals between different stakeholders, a negotiator of complex agreements, a translator of learning outside the curriculum, an event producer of multidisciplinary meetings and workshops (Hero, 2014c). This has also direct impacts on the management of educational premises. What are the physical spaces actually needed for supporting learning? Through new types of co-operation, educational spaces can become venues for much more. We are moving towards shared spaces supporting learning rather than spaces dedicated only to certain institutions.

Regional youth innovation activity can be organized so as to identify common goals, shared practices, and pedagogical best practices. This may be a fruitful path to lowering the threshold for multi-level collaboration between education institutions and developing the innovation activities into an employment path.

There are still hurdles, as well. Structural impediments, rigid operational models, and system inflexibility are typical obstacles to cross-level cooperation. On the other hand, they may also serve as easy guises to hide behind. Instead, learning goals and educational programmes seldom seem to pose problems.

Successful cooperation in a learning project requires a trailblazing attitude from the teachers and developers. Sometimes appropriate support can be acquired from educational management. As more experience accumulates, and as the new type of innovative cooperation becomes a prevailing strategy, this problem will likely alleviate. In the future, we believe a future-oriented, innovation-igniting, customer-centric, service-design way of cooperating across boundaries will become the norm for education institutions, rather than the exception.

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