Chapter 5
Networked Learning in, for, and with the World

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Abstract This chapter proposes a framework for networked learning in, for, and with the world at mode 3 universities. First, a theoretical overview of the configuration and development of the mode 1 university (the ivory tower), mode 2 university (the factory), and the mode 3 university (the network) is provided. Second, the framework for the networking mode 3 university is developed through presenting and integrating organisational guidelines, pedagogical formats, and learning principles. Then, two categories of educational patterns for learning in and with the world at the networking university are introduced and described: (1) bringing education into the public (learning *in* the world) and (2) bringing the public into education (learning *with* the world). Examples of concrete educational design patterns are also given. Finally, three dimensions for students' learning *for* the world through hybrid networks at the mode 3 university are developed: networked learning for the world as citizenship, networked learning for the world as trust, and networked learning for the world as ecology. The main contribution of the chapter is to develop the notion of the networking university along with its implicated teaching and learning practices.

Institutions in, with, and for the World: The Changing Mandate of the University

With the concept of 'mode 3 university' as overarching framework (Barnett, 2004; Barnett & Bengtsen, 2017; Nørgård & Bengtsen, 2016, 2018), this chapter considers how traditional forms of and formats for teaching and learning within higher

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A. Littlejohn et al. (eds.), *Networked Professional Learning*, Research in Networked Learning, https://doi.org/10.1007/978-3-030-18030-0_5

education can be rethought, reconfigured, and redesigned in order to facilitate hybrid networked learning in, for, and with the world.

What it means to 'be' a university is changing (Barnett, 2011), something offering challenges, opportunities, and potentials to the teaching and learning that takes place there. Through history, and across national contexts and cultures, the 'being' of the university and its livelihood and mandate has altered (Barnett, 2018; Wright, 2016). Through these transformations where the university, either voluntarily or by force, has sloughed its skin, the roles, relations, and meaning of teaching and learning had to change with it. This chapter describes some of these transformations and considers the implications, challenges, opportunities, and potentials of teaching and learning in and through hybrid networks at the mode 3 university.

The Ivory Tower

The mode 1 university is related to an understanding of universities as juridical and political autonomous. In this mode, the university has a more primordial and privileged understanding of knowledge creation than other societal actors and institutions, and the university as an institution is defined with greater distance to its societal and political surroundings and environments. Sometimes, and a bit onesidedly, this mode is referred to as the *ivory tower*, typically in a not too positive sense and alluding to a secluded university, distant from the world and with its gates closed. It is what the higher education philosopher Ronald Barnett has more favourably called 'the metaphysical university' (Barnett, 2011). Here, knowledge is universal and kept within the university walls in a self-sustaining ecosystem. The inhabitants of the ivory tower are the keepers of knowledge, and their task is to transfer knowledge from one generation to the next and from university to society. In this mode, teaching and learning exist within a closed geography and a closed ontology (Barnett, 2011; Barnett & Bengtsen, 2017). It is a university that controls knowledge, what it takes to be educated, and what counts as needed knowledge and competencies. The university is a tower, transmitting knowledge to the students until the students themselves become towers of knowledge and, thus, may enter into society to transmit that knowledge to it (Barnett, 2011). Today, the configuration of the mode 1 university is powerful in the core disciplinary work that is part of educational programmes. It is the epistemological configuration activated in pure research, and it is still embodied in existing universities.

Even though the rationale of the mode 1 university is perhaps, today, limited mostly to core disciplinary activities and epistemologies, we see that some of the structures of this rationale have been taken up in much of the educational technology and systems today. Learning Management Systems such as Blackboard or Moodle are to a large degree systems with a closed geography and ontology and in control of communication and knowledge as systems for transmission of information or knowledge, or at least for keeping the majority of the control and power on the

side of the university and in the hands of academics. The same could be said of teacher videos or screencasts that leave no room for dialogue or interaction. Here, students sit back and receive the transmitted knowledge without being able to interrupt or raise question. Interestingly, this also goes for many Open Educational Resources (OER) and Massive Open Online Courses (MOOC), especially the so-called xMOOCs that often resemble digital correspondence courses where the participants are only able to interact with the information in the system, not each other or the teacher that is often totally absent, and as such they are cut off within their own tower of knowledge where a network transmits knowledge into the tower.

So, it is not that the mode 1 university is backward-looking or archaic but rather that the university's overall mandate has changed and its way of being has to be moderated and renegotiated in relation to external stakeholders and demands from the wider socio-political and economic contexts (Wright, 2016). The mode 1 university, in the sense that we know it from earlier historical periods, has been forced to transform central parts of itself into the mode 2 university. In the mode 2 university-configuration, the tables have turned and there has been a change in the balance of power between society and university.

The Factory

The mode 2 university has many forms of being. Barnett (2011) mentions, amongst others, 'the entrepreneurial university' focused on employability, societal use-value, and economic growth and 'the corporate university' concerned with management, employers, funding, and competitive position. Across these different forms of being, there are some common traits. Taken together, these traits can be said to constitute the mode 2 university. Here, the ivory tower as a dominant trope has been replaced by *the factory*. Following from this, the university is now positioned as the producer of the future workforce through transferrable skills and professional competences. In the factory, it is no longer the university that defines, owns, and transmits knowledge to society. Performance, output, benchmarking, and societal use-value is core to the university's mandate, and it is up to the university to substantiate that it is delivering what society demands as well as upholding a strong position in the global competition between universities.

In the mode 2 university, researchers and teachers find themselves in a situation where they have lost much of the ownership and the power of definition, which characterises the mode 1 university. The factory is not in control of its own fate, it is rather a question of market forces and demand, and here relevance and value are measured in the ability to efficiently produce a future workforce with competencies enabling employability as well as the production of socio-economic growth. This is in line with what Shumar (1997) calls the neo-liberal university growing out of 'new capitalism' and 'the knowledge economy' (Shumar, 1997; Wright, 2016). In the factory, knowledge and students are commodities to be sold to society for profit or

survival. The commodities will be brought to the extent it is deemed useful. So, it is the university's responsibility to produce the right students with the right competencies and skills that enable them to occupy the right jobs that will ensure the right socio-economic growth. Teachers are held accountable for the production proceeding according to plan in such a way that not too much value is lost in the system. As such there are production schemes and measurement tools in place to ensure that the student produces at the right speed and with desirable employability. The mode 2 university should be equipped and ready to help society with whatever challenges and problems it faces just now and is therefore occupied with educating for the present or immediate future. It is a professional factory, complete with branding strategies, corporate culture, accelerators, incubators, strategic communication, and so on (Barnett, 2011).

The mode 2 university has an open geography susceptible to the world and its present condition and power structures. However, its ontology is still closed as it is society that is in control of what it constitutes, which is not something open to interpretation, dialogue, or experimentation. The transformation from ivory tower to factory is also visible in the intrusion of private companies into the heart of the university. Both in relation to taking up actual space on the campus itself and being in charge of developing and managing the educational technology and systems used to do education. Also, private companies influence the qualification of knowledge and competencies as well as the relevance of courses or study programmes.

The mode 2 university's integration of higher education, professional contexts, and different cultural practices in the wider societal environment, which was a refreshing 'opening of the windows in the ivory tower', seems to have become just as dominant as the original mode. Where the mode 1 university operates through a one-way transmission of knowledge from ivory tower to society, the mode 2 university is controlled through a one-way transmission of knowledge demands from society to university. However, we now see contours of a more dialogic relation between university and society; what has elsewhere been called the emergence of 'academic citizenship' (Nørgård & Bengtsen, 2016), the 'ecological university' (Barnett, 2018), and 'the co-operative university' (Nørgård & Mathiesen, 2018).

The Network

At the 'mode 3' university, the institution, society, teachers, researchers, students, employees, workers, and societal citizens enter into closer dialogues and partnerships. The aim is to co-create future knowledge and societal value that go beyond immediate use-value, present demand, or measurable output – thus substituting the economic and instrumental university-figuration of the mode 2 university with a configuration of the mode 3 university focusing more on human societal value and citizenship.

Unlike in the mode 1 and mode 2 university-configurations, neither university nor society holds the power of definition in relation to what constitutes valuable knowledge, education, and academic development. Rather, both society and the individual institution need to treat the university as being ontologically and geographically open. Implying that they need to enter into conversation and collaboration and be committed to each other to create knowledge for an unknown and open future. To do this, university and society need to be networking and networked. That is, integrated and embedded into each other to such an extent that they acknowledge each other as part of the same ecological system or world. In the circumstances, society and university can exist by serving each other and the people living within their entangled networks. This has caused Barnett (2018) to call the mode 3 university an ecological university. One particular configuration of the ecological university is *the networking university* that is described in the next section of this chapter.

In the *network,* the campus, classrooms, and offices are open to society, but not as kicked-in gates or broken bulwark where society and corporations have flooded or taken over the university. Rather, the mode 3 university configures itself as an open network entangled in and connecting with other networks, enabling citizens, professionals, workers, researchers, teachers, students, and whoever is interested and engaged in the networks to think, talk, and tinker together. This reconfiguration of the university from competence factory to ecological network highlights (a) societal value as more and other than immediate and instrumental use-value, (b) human worth as more than future workforce, and (c) higher education as more than holding the right degree and competencies or skills. To achieve this, it requires mutual commitment, care, respect, and integration of networks between university and society in an effort to co-create a shared world (Barnett, 2011; Nørgård & Bengtsen, 2016). This entails that both society and university are able and willing to network and be networked and to 'participate in the idea of the university' (Ossa-Richardson, 2014, p. 154).

The networked and networking entanglement needs to be formed and upheld through a bond of mutual commitment. The university should not try to be of value to society through meeting its demands as it does in the mode 2-configuration. Rather, it is an insistence on the inherent worth and value of the university in itself; of *academic* professional development, and of *academic* citizenship. But that does not entail a university that can take the power back and retreat to the ivory tower as a backlash against the factory. To become a networking university, it must be open and networking, and at the same time, it must be open for being networked in return – to keep ontology and geography open. Consequently, the networking university opposes to socio-economic structures, supplies and demands, or use-value of academics.

In the next section, the underlying value framework for the networking mode 3 university and the pedagogical principles integrating and expressing this value framework are explicated.

University Teaching and Learning in and Through Networks

The term 'hybridity' seems particularly apt when trying to grasp how the changing mandate of the university and the emergence of the mode 3 university impacts the future of teaching and learning. Hybridity refers in general terms to a mixture of parts or emergence of new breeds through the cross of animals (e.g. mules or tigons), plants (e.g. grapefruit or rabbage), or cultures (e.g. Bollywood or glocal education). Cultural hybridity can, according to Mikhail Bakhtin, be viewed as 'intentional hybridity', while organic hybridity, in the form of animals or plants, is a form of 'unintentional and unconscious hybridization'. Intentional cultural hybridity, such as hybrid networks or education, consists of mixing different discourses, perspectives, and forms (Bakhtin, 1935/1981). Accordingly, hybridity in education implies a system for bringing different discourses and formats in contact with one another that aims to invigorate one format by mixing it with another. Rorabough and Stommel (2012) specifically address the concept of hybridity within education, and view it as a way to keep education open to the world and itself. As such, hybridity strives to cut across, fuse, entangle, or circumvent traditional dichotomies within higher education such as online-onsite, digital-physical, formal-unformal, university-society, learning-teaching, study-work, individual-collective, and so forth. To do so, there is a push against the closed ontology and geography framing teaching and learning at the mode 1 and mode 2 university, as processes of indeterminacy, open-endedness, exploration, experimentation, dialogue, and co-creativity are highlighted.

This also entails the opening up of teaching and learning as university and society meet to talk and work together. Looking at teaching and learning in higher education through the lens of hybridity, accentuates how education at the mode 3 university invokes entanglements and nested ecologies rather than fixed knowledge or socio-economic measurability. At the mode 3 university, teaching and learning shift from transmission of knowledge (mode 1) or knowledge production (mode 2) towards teaching and learning in hybrid network collectives. Here, more traditional research-informed teaching (teacher transmitting knowledge about other people's research) and research-based teaching (teacher transmitting knowledge about own research), is fused with research-producing students (students producing own research, based on knowledge). This puts research-producing students on equal footing with research-based teachers, as they both become researchers and partners at the university – what elsewhere has been termed *Participatory Academic Communities* (Aaen & Nørgård, 2015), *Academic Citizenship* (Nørgård & Bengtsen, 2016), or *Teaching-based Research Collectives* (Nørgård & Mathiesen, 2018).

Overall, teaching and learning in and through hybrid networks carry the potential to resist and push against the managerialism and standardisation of the commodified competence factory. Through hybrid teaching and learning, people inside and outside the classroom and campus get entangled in joint dialogues, collaborations, and communities. As the mode 3 university enters into dialogue with society, its teachers enter into collaboration with students, and the onsite classroom enters

into dialogue with online research communities. In this way, the possibility for other forms of professional academic development and networked learning comes to the fore.

One way to grasp this emerging possibility and create a pedagogical framework for teaching and learning in and through networks at the mode 3 university is to connect the following:

(a) Guidelines for co-operatives (the pinnacle of mode 3 *organisations*)
(b) Emerging formats for innovating pedagogy (embedding mode 3 *teaching* elements)
(c) Principles for connected curricula (pointing towards *learning* dimensions in mode 3 institutions)

When connected, organisational guidelines, pedagogical formats, and learning principles constitute a three-dimensional framework for teaching and learning in hybrid networks.

Organisational Guidelines for Members at the Networking Mode 3 University

The framework for co-operatives (Co-operative identity, values and principles, n.d.) shares strong similarities with the conceptualisation of the mode 3 university. A co-operative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise. The Rochdale principles (The Rochdale Principles, n.d.) are a set of ideals for the operation of co-operatives. Co-operatives are based on the values of self-help, self-responsibility, democracy, equality, equity, and solidarity. In the tradition of their founders, co-operative members believe in the ethical values of honesty, openness, social responsibility, and caring for others (Zeuli & Cropp, 2004).

The co-operative guidelines, or Rochdale principles, are a set of guidelines by which mode 3 institutions – such as the networking university – can be organised. These guidelines work bottom up, and thus, must be visible in mode 3 teaching and learning in order to become manifest as organisational structures. The reworking of the Rochdale principles into the below seven points for co-operative universities offers a lens to think about how to transform universities into more ecological organisations in ways that invite for professional academic development and citizenship:

1. The university is open to all through voluntary and democratic membership.
2. Higher education takes place through democratic organisations controlled by their members, who actively influence and decide their policies and practice.
3. Members contribute to, and democratically control, the mandate of their university.

4. Higher education takes place in autonomous networks controlled by their members.
5. University teaching provides education and professional development for their members so they can contribute efficiently to the development of their university and society.
6. Universities serve their members most efficiently and strengthen the Networking University by working together in hybrid networks through local, regional, national, and international structures.
7. Higher education aims for sustainable development of its member communities through policies approved by their members.

Organisational guidelines for the mode 3 university, such as the networking university, need to be connected with pedagogical formats as described hereafter. Together, this will enable the formation of macro-structures for teaching and learning in and through hybrid networks that scaffold and promote professional academic development within mode 3 universities.

Pedagogical Formats for Higher Education at the Networking Mode 3 University

One set of potential formats to draw inspiration and develop pedagogy from when considering the future mode 3 university, can be found in the yearly *Open University Innovation Report*. Every year the Open University in collaboration with different partners publishes its annual *Open University Innovation Report* presenting emerging pedagogical directions for future education, to inform and guide teachers and policy makers in productive innovation (Sharples et al., 2016, p. 3). Reading through Innovating Pedagogy 2016 and 2017, 20 pedagogical formats are identified, thoroughly described and grounded in research in the reports. The formats carry particular potential and pertinence in regards to future academic development and professional learning in hybrid networks. Although all 20 directions can fit within the mode 3 university, 7 of them can be said to have a tight fit with the networking university (see Ferguson et al., 2017, p. 3–4; Sharples et al., 2016, p. 4–5):

1. *Learning through social media*: Social media can offer a range of learning opportunities such as accessing expert advice, encountering challenges, defending opinions, and amending ideas in the face of criticism, inaccurate information, biased comments, and hostile responses.
2. *Teachback*: One person (who may be the teacher, an expert, or another student) explains their knowledge of a topic to a learner. Then that learner attempts to explain, or teach back to others, what they have come to understand.
3. *Learning from the crowd*: Amateurs and experts exchange ideas, generate and discuss content, solve problems, vote for the best solutions, and raise funds. Another example is crowdsourcing, that is, research initiated by the general public, rather than by scientists.

4. *Learning for the future*: Future-ready learners have agency and autonomy in planning what and how to learn. They have the skills to be responsible citizens, contributors, and innovators in an uncertain future.
5. *Learners making science*: Enabling learners to experience how Science is made can enhance their content knowledge. It can also develop scientific skills, contribute to their personal growth, and result in identity change and increased understanding of what it means to be a scientist.
6. *Open textbooks*: Open textbooks can be seen as part of a broader move towards 'open pedagogy', which emphasises open content and open practices. They have an open licence that enables everyone to reuse, remix, revise, redistribute, and retain them.
7. *Intergroup empathy*: People from different backgrounds interact with each other, even if they come from countries or cultures that are engaged in conflict. This means that skills such as communication, teamwork, and empathy are important.

Reading across the pedagogical formats from Ferguson et al. (2017) and Sharples et al. (2016) common approach to teaching and learning through hybrid networks for professional academic development reveals. Networked learning in, for, and with the world on the grounds of the co-operative guidelines and innovating pedagogy formats is characterised by developing future academic citizens that enter into dialogue and participate in society as responsible professionals and citizens, contributors, and innovators. It is a move towards education in and through entangled networks where learning, courses, curricula, and even institutions can be constructed in collaboration with other professional communities and community members. To make this approach operational as concrete learning practices, it needs to be embedded in curricular learning principles as described in the next section.

Learning Principles for Students' Academic Citizenship at the Networking Mode 3 University

One curricular framework that seems to align particularly well with the networking university is the *Connected Curriculum* framework which is the educational strategy 2016–2021 for University College London (Fung, 2017). In the foreword to *A connected curriculum for higher education,* Barnett highlights 12 dimensions of connectedness (or hybridity) that can be practised as learning principles. These dimensions are hybrid connections between disciplines, campus and wider world, research and teaching, theory and practice, student and teacher, student inner being and student being in the world, student and students, students and disciplines, curriculum elements, student perspectives, member and university, learning at university, and learning in society (Fung, 2017).

Taken together, these connections create professional development and learning through what Barnett calls *institutional vibrancy* that:

> bring the university into a new configuration with the wider world in all its manifestations. There is surely a sense here of the university coming out of itself to attend to all the many ecosystems in which it is implicated – the economy certainly, but the ecosystems too of knowledge, social institutions, persons, learning, the natural environment and even culture. The Connected Curriculum opens, in short, to a new idea of the university, a university that is fully ecological, attending carefully to the many ecosystems in its midst. (Barnett, 2017, p. vii)

The concrete implications for learning in such hybrid networks is explicated through six identified learning principles (Fung, 2017). These can also serve as learning principles to design for and consider learning at the mode 3 networking university when they are integrated with the pedagogical formats and organisational guidelines. The principles are:

1. *Students connect with researchers and with higher education research*: Students may, for example, become part of research groups, or collaborate with researchers in depth.
2. *A through-line of research activity is built into each programme*: Each programme of study should be designed in such a way that students experience a connected sequence of learning activities that empower them, step by step, to apply skills and dispositions needed to undertake actual research of their own.
3. *Students make connections across subjects and out to the world*: Though connecting across disciplines and out to the world, students can be empowered to articulate their own academic values and consider their current and future academic contributions to society.
4. *Students connect academic learning with workplace learning*: Students need to be able to connect academic learning with professional work and for lifelong learning.
5. *Students learn to produce outputs – assessments directed at an audience*: Through some of the work they produce for the purpose of being assessed by faculty members, students can engage in partnership with local or wider communities.
6. *Students connect with each other, across phases, and with alumni*: The focus for this final dimension is on ensuring that students feel a sense of belonging as they study and being part of an inspirational learning and research community.

Overall, these six learning principles highlight a shift in the structure of higher education as well as in professional academic development towards hybrid connections and networks and towards students as research partners and equal members of the university through engaging in collaborative research production, collective research networks, and co-operative professional learning partnerships with society (Aaen & Nørgård, 2015; Fung, 2017; Nørgård & Bengtsen, 2016; Nørgård & Mathiesen, 2018).

In the next section of the paper, the organisational guidelines, pedagogical formats, and learning principles will be illustrated and concretised through presenting some potential educational design patterns for students networked and networking professional learning at the mode 3 university.

Hybrid Education: Educational DESIGN Patterns for Learning in and with the World

Educational design patterns have been proposed as a way to articulate the challenges of educational practice alongside developing viable methods for addressing those challenges (Goodyear, 2005; Mor & Warburton, 2014; Mor & Winters, 2007). Originating from the work of Alexander et al. (1977), the pattern approach has been widely adopted in software design and engineering, and later in the domain of learning design and education. Educational design patterns are particularly good at capturing pedagogical and institutional practice in ways that sustain educational and organisational change – such as a shift from the mode 2 to the mode 3 university.

At the core of an educational design pattern is a triplet: (a) an educational problem (or challenge), (b) the educational context in which this problem occurs, and (c) a possible method or educational design for solving this particular problem. Once a particular pattern has been adequately described and validated, the pattern authors augment it with theoretical justification, links to additional patterns, and notes on the barriers and limitations of the pattern (Mor, 2013). While individual patterns have their merits, the real power of design patterns (in contrast with other representations) is in the links between them, forming networks of design knowledge within a certain domain called a pattern language. The work of Köppe, Nørgård, and Pedersen (2017) identified 85 pattern candidates. The level of descriptions varies from just a title and a rough idea to a fully developed description of an educational design pattern. The seven pattern candidates provided below, have been selected from the 85 to best exemplify how the networking university and the pedagogy of teaching and learning through hybrid networks can be put into practice as networked learning in, for, and with the world. As such, the seven pattern candidates included below are meant to convey a basic understanding of how networked learning in and with the world could exist.

Pattern Candidates for Bringing Education into the Public: Learning in the World

- *Street tasks*: Bring the students out to the streets to have real-world experience. Assign activities that bring individuals or groups to engage in out-of-classroom experiences. Students should learn experimenting with/in the world. This can help them develop as a professional academic citizen through interaction with people. This pattern is somewhat related to the ‘runaway classroom’ (see below), but the students are often dispersed at different locations and carry out task in small groups or individually.
- *Education flashmob*: Students (with or without teacher) self-organise to meet at a specific location to engage the public in the form of a shared learning activity that has the transformatory potential either for the flashmob or the audience.

For example, students of architecture could meet at a building and engage and transform it together. The flashmob takes place in the public often carrying with it an element of spectacle or expressive quality, so that outsiders are drawn in or invited to join. Or students meet at 'tweet-bars' to express, experiment, or explore a concept together in public.

- *Nomadic student*: Students taking part in classes and lectures wherever they are in the world. Whether they find themselves at home, on a bus, in another country, a coffee shop, supermarket, or in the forest. In this way, students are connecting with each other through the onsite/online classroom as a hub. This allows students to be nomadic but located in distributed localities rather than becoming displaced virtual students. While riding the bus, you can be participating in a lecture or group discussion. In a coffee shop, you can be doing assignments together with other students scattered across localities but together in the same online document or conversation. The teacher functions as a hub connecting, drawing in and reaching out to the students as they dispersed in the world but connected through the teacher hub.
- *Runaway classroom*: Many societal issues, complex topics, or collective partnerships can only be engaged in a classroom to a certain extent. As teachers, we run the risk that the boundaries of classroom and campus set the boundaries of our teaching. Through teaching, students should also learn to engage with experts in society or experience teaching and learning at authentic sites. This is why field trips are organised. However, such trips are the exception rather than the norm. Yet, through digital technologies, a classroom can pop up anywhere, and through these technologies students can form a multi-sited classroom outside campus. Runaway classrooms can be supported or organised by a teacher that takes the entire classroom 'in the backpack' and moves it into the world. In this way, the runaway classroom has left the campus with the teacher in order to go somewhere else. In this way, teaching hits the streets, making education something that takes place in the public domain.

Pattern Candidates for Bringing the Public into Education: Learning with the World

- *Collaborative open online projects*: Create online projects in which students work together in groups or collectives with people outside the course. Connect people across contexts to engage them in shared projects, societal issues, or community interventions. Work together in a large community across groups and collectives to create large-scale projects and big impact. Large scale projects connect professionals, students, teachers, researchers, and citizens and could be organised as Massive Open Online Projects (MOOPS) to generate lasting change in multiple contexts or create projects with spin-off products and shared content. But this pattern also works on a smaller scale. For example,

small projects creating group web sites with local community services or companies. It can also be in the form of students as a group contributing to and taking part in a large-scale external project such as open educational resources, book projects, online curated content, onsite festivals, or conference.

- *Integrating practitioners*: Connecting a course to society by bringing into the classroom people, activities, problems, and tools. The integration or collaboration with practitioners or professionals can take on the form of cases. It can be in the form of private companies, public institutions, and cultural organisations or in the form of more informal communities, networks, or groups of people. Integrating practitioners has the potential of transforming student assignments from artificial or simulated tasks to authentic or actual contributions to society. To promote academic connections and collaborations with society, teachers can bring practitioners in to demonstrate application of knowledge and competencies in practice early on in the process. Make space for dialogues to develop throughout the process between integrated practitioners and students. One possibility is to set up a shared project space for practitioners, students, and teachers to collaborate around shared research agendas. But practitioners can also be brought in to evaluate and discuss student end products and course deliverables. Integrating practitioners aims at creating connections between theory and practice, students and practitioners, and university and society. Working with practitioners may take more time and requires more careful and reflective planning. The schedule of practitioners varies often and sometimes they might not be able to provide input or feedback on time.
- *Global online interuniversity teaching*: In interuniversity teaching and learning academics, researchers and teachers teach on each other's courses across different universities and/or courses by giving lectures and participating in each other classrooms or courses through video conferencing or shared writing spaces. One benefit is that teachers' get the opportunity to take advantage of their professional networks to invite research colleagues across the globe into their classroom and think and talk together without having to pay the cost of bringing them there physically. Students get the benefit of experiencing multiple perspectives and voices in their course, making it more connected, polyphonic, and hybrid. It's not just expertise that is added, but a complexity of perspectives and voices. Furthermore, colleagues in the teacher's network are much more obliged to contribute to a course for an hour or two, if it does not mean that they have to fly to another country in order to be there. Other benefits could be that students feel part of and connected to a global research community. It is however important that the teacher is the hub in interuniversity teaching as the course otherwise runs the risk of becoming fragmented where 'teacher of the week' just keep dipping in and out without any coherence. The teacher can't just turn the whole class over to guest speakers and call it a day. Rather, the teacher needs to be the spider in the web, sensing and pulling the strings. Integrating interuniversity teaching in the course with all its accompanying benefits therefore also means taking on the ethical responsibility for the collective co-located experience and the coherence of the course spinning webs between sessions and across the curriculum.

Taken together, the above seven patterns point towards concrete networked and networking teaching and learning formats that promote learning in and with the world. Considering organisational guidelines, pedagogical formats, learning principles, and educational patterns, a certain university is formed; it is not just any mode 3 university but a particular mode 3 university – *the networking university*.

From Patterns to Network: Learning for the World

Synthesising the above into the networking university, three dimensions for learning in, with, and for the world through hybrid networks at the mode 3 university can be developed; networked learning for the world as citizenship, networked learning for the world as trust, and networked learning for the world as ecology.

Networked Learning for the World as Citizenship

Through patterns for integration and collaboration, different public arenas and actors are inter-weaved into the academic enterprise, and vice-versa. The learning activity itself becomes a form of societal co-operation and co-commitment. Learning at the networking university becomes something that takes place within society and creates new societally infused knowledge *from and for* society. Accordingly, the networking university becomes a 'societal driver' (Shumar & Robinson, 2018) for a better future by generating societal value through academic practice. Hereby, academic practice becomes a form of citizenship, and students and teachers are seen, explicitly, as citizens – members of the society through their academic practices. Similar to the term 'academic citizenship' (Macfarlane, 2007; Nørgård & Bengtsen, 2016), Arvanitakis and Hornsby (2016) suggest the term the 'Citizen Scholar' where the university (and its students) may not speak for itself, but *for* others and in the place of others. When becoming inter-weaved with other societal domains, the academic voice becomes merged with other voices from professional domains, political domains, cultural domains, and private domains. At the networking university, the academic voice and practice of its inhabitants become *inter-patterned* into networked learning for the world as citizenship as is visible in the design patterns of 'Street task' and 'Educational flashmob'.

Networked Learning for the World as Trust

Through integrated citizenship, mutual trust between university and society is built into the network. Through allowing itself to be networking and networked, the mode 3 university regains the trust of society that it may have lost in the mode 1

configuration, and society regains the trust of the university that it may have lost in the mode 2 configuration. The networking university is held together by a mutual trust, which can be argued to be central to its academic practice and critical thinking (Gibbs, 2004). Here, trust should not be understood as a functional and formal sort of mutual agreement, but one of also mutual recognition and respect. In line with Gibbs (2017), we would even argue that the patterns outlined above let us define trust also as compassion and a deep mutual care emerging as a bond between university and society (Dall'Alba, 2012). Collaboration around academic teaching and learning activities demands a strong sense of trust between universities and wider societal domains. The difference in knowledge forms, methods, and criteria for validity are highly different and require that academics and professionals care for and trust each other. At the networking university, the collaborative and collective practice between its inhabitants and the wider society become *inter-patterned* as is found in the design patterns of 'Integrating practitioners' and 'Collaborative open projects'.

Networked Learning for the World as Ecology

When mutual trust is beginning to consolidate between different academic, professional, institutional, and private domains, the network starts to form an ecology. In an ecology the many individual and different domains cannot be immediately translated or transferred towards each other, but slowly they become *hybrid* joined together through a common interest and bond. As Barnett (2018) points out, an ecological university is defined *through* its interconnectedness and embeddedness with a wide range of societal domains. The network as hybrid ecology goes beyond sustaining the present. Knowledge creation, teaching and learning, takes place as a particular form of societal fecundity (Feyerabend, 1999), where knowledge and higher education may contribute to societal needs to become closer connected with the whole world, including but going far beyond the human domain. The patterns that show that the mode 3 university as networking university is life-infused, even saturated by life, manifesting itself as networked learning for the world as ecology, are visible in 'Nomadic student', 'Runaway classroom', and 'Global online inter-university teaching'.

Conclusion: Professional Networked Learning in, for, and with the World

When learning in and learning with the world is integrated in the mode 3 university while critically reflecting the different frameworks and how they connect in meaningful academic ways, higher education has the potential of supporting and

promoting professional networked learning in, for and with the world. To make this happen, it is necessary that universities and teachers undertake the ethical responsibilities that come with these new modes of being and learning at the networking university.

When work is undertaken to transform universities, teaching and learning, it is imperative that the darker sides of such change is embraced and given words to, what we have elsewhere named the 'shadowy siblings' of bright and promising educational transformations (Aaen & Nørgård, 2015). Seemingly, promising and enriching practice, patterns, and principles for professional networked learning for the world also contain side effects, unintended consequences, and negative outcomes and experiences for some students and teachers. To mitigate such risks, the teacher needs to take on more extensive ethical, relational, and social obligations as campus, courses, learning, and students are opened up to the world. Often, students and teachers will find themselves on shaky grounds, as will professionals and practitioners, and thus, presence, commitment, care, authenticity, dialogue, and community spirit become more important in education – what Nixon (2008) calls *the virtuous university* or *the moral bases of academic practice*.

Teachers and university are obligated to not leave the student hanging like a fly in the web, but scaffold and sustain ethical partnership relations between teachers and students, university and person, university and society, academic, professional, and personal spheres. Learning in, with, and for the world at the networking university requires equal partnerships, mutual respect, and communal dialogue: 'academic citizenship occurs when university becomes a place where the "they" is being dissolved, when university, society, and people are nested within each other' (Nørgård & Bengtsen, 2016, p. 12).

Here, the university as network could be seen as a potent metaphor for transforming the way the objectives of higher education and the purpose of teaching and learning are currently articulated. It is a call for a university where its members participate in, for and with society. This article's contribution to professional networked learning calls for further research and thinking into the ways university and society can work together, students and teachers can participate and learn in cooperatives in and with the world, as well as how future professional and academic citizens can participate in society through entangled learning networks and professional-academic networked and networking practice.

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