

Organizing networked learning

Anne-Marie Poorthuis

Stichting Eigentijdse Verbindingen, poorthuis@netwerkimpuls.nl

Abstract

A networked context is dynamic. In this paper, I set up the organization of learning in a networked context starting from four leads. The first lead is analyzing involvement and acting as an example of a network. We view the network as a unit of analysis and the core of the network is the initiative. We make use of the involvement that the initiative radiates and attracts. I present the network analysis model as a means to order involvement and to identify different positions within a network. I also provide a vocabulary to communicate about them. The second lead is communicating knowledge and acting as an example of a node. We view the network as a knowledge infrastructure of nodes and links, that irrespective of size or capability provide access to knowledge in their own way. This is called a nodal network. The third lead is preparing effort and acting as an example of environment. We view the network as an inviting and challenging space in which various initiatives and networks come together, explore relationships, experiment, share and attune. An aid to creating an inviting environment is turning something into a theme. To create space we invite a diversity of related initiatives and networks to come together and learn from each other. The fourth and last lead is facilitating abilities and acting as an example of a programme. When we translate network into programme, we see a tissue of layers, lines, episodes and moments in which parties act, knowledge arises, effort emerges and the ability of the network to handle issues evolves into strategies, improvisations, habits and routines. Together, these leads offer a tangible steering framework for following and leading the otherwise so diffuse concept of 'network'. By unravelling 'network' the way I propose here, we can find the leads to establish relationships, handle the dynamics and learn to organize in a networked context. This paper approaches learning in a networked context as a matter of organization and explores the leads that allow us to act in a networked context. After describing the four leads I present some cases and the issues they give rise to. These I consider my questions for further research. I conclude with some general remarks about the organization of networked learning.

Keywords

Actor, network analysis model, networked context, steering framework.

Introduction

Anno 2012, networked learning has become an accepted term and more and more it goes without saying that we engage networks in learning. In schools and social environments we witness an increased interest. Still, how do we as actors, for example in a school, city, sector, company or team, organize learning in a networked context? A networked context is dynamic and that places a lot of demands on organizing. Networks arise, are formed with that which is currently topical and involved, develop, exchange, attune, operate temporarily, break up and can arise again. The art is knowing how to organize this. Acting in networks, co-creating them and steering them what I call learning. It is essential always to serve as an example and the challenge is to organize with this example.

This paper approaches learning in a networked context as an organizational issue and identifies four leads towards dealing with this issue as an actor and serving as an example. Together, the leads offer a tangible steering framework for following and leading the otherwise so diffuse concept of 'network'. By unravelling 'network' the way I propose here, we can find the leads to establish relationships and to handle the dynamics of the networked context.

In this paper I establish a relationship between organizing and networked learning. Networked learning crossed my path when I was asked to contribute towards the organizing of a networked learning school. I approach networked learning as an organizational issue. In fact, the way I organize is also the way I research. This is reflected in the construction of this paper. This paper is a first step towards a networked research methodology. Pivotal in this methodology are four leads an actor can take to engage with and in a network.

Leads

I identify four leads that enable an actor to engage in the organization of learning in a networked context. Leads help to establish contact with the networked context, and to translate to who we are, what we know, what we want, what we can and what we do. The four leads whereby we can follow and lead a networked context as actor and organize the learning, are as follows:

- Analyzing involvement and acting as an example of a network.
- Communicating knowledge and acting as an example of a node.
- Preparing effort and acting as an example of environment.
- Facilitating ability and acting as an example of a programme.

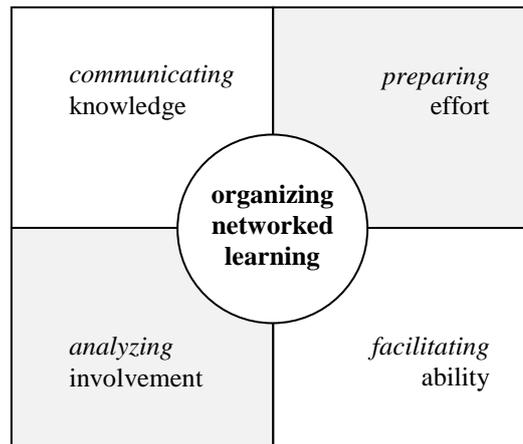


Figure 1: Steering framework networked context

Aristoteles (in Schomaker, 2005) distinguishes four causes to manage the dynamics between potential and reality. The first cause is material. In a network this is about everything that is involved, the ingredients as potential. The second cause is efficiency. This is about the knowledge, the ideas, the ways that contribute to the network. The third cause is formal. This is about building with and expressing the possibilities and effort of the network. The fourth cause is final and this is about the degree to which the network is really capable of handling issues. These causes are related to the leads I propose here. The leads together make up a steering framework to organize learning in a networked context. It concerns steering a networked context of which the actor is part of and organizes the example. The actor has a researching and building role. He or she establishes relationships by analyzing, communicating, preparing and facilitating. Involvement, knowledge, effort and ability are the building blocks. Each of the building blocks has its own cause and moves by itself, consecutively, interactively and as a whole. We can start organizing from each lead, and bind the leads together into a story. Bateson (1979) defines a story as a small node or a complex of relevant pieces of the same story. Thinking in terms of stories provides connection. Bateson indicates that a binding pattern can best be imagined as a dance between interacting pieces. Aware of these dynamics I now describe the leads individually, but also in a specific sequence. The interaction between the leads returns in the steering framework. By serving as an actor-example myself, I work on bringing everything together and making it into a whole.

Analyzing involvement and acting as an example of a network

The first lead is analyzing a network of involvement that surrounds an initiative and acting as an example of a network. We take the initiative as core of a network and make use of the involvement that the initiative radiates and attracts. If we let go of the initiative as core, the network of involvement collapses. Around a new initiative as core a new network once again is formed. The network is an analysis-unit. This follows the actor-network theory (Latour, 2005) which assumes that every human is embedded in and acts in networks. These networks do not only consist of other humans, but also comprise ideas, means, thoughts, sources, materials, software et cetera. A network is everything that is involved with a specific initiative. In fact, a network consists of everything that is involved with a particular initiative. The network analysis model (Poorthuis, 2003, 2006)

arranges involvement and offers a terminology to identify different positions of involvement within the network. This network analysis starts with pinpointing the initiative as the core of the network, orders a circle of everything and everyone involved (ingredients/entities) around it, seeks the links in between and differentiates between the network positions people can take between the core and everything involved.

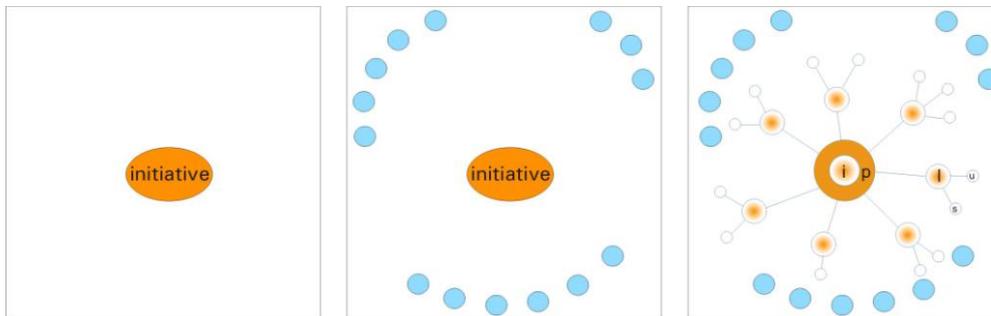


Figure 2: Network analysis model Poorthuis (2003)

The network analysis model distinguishes between five positions of involvement within the network:

- I: the Initiator starts the initiative, often begins alone and tries to find involvement.
- P: Partners put their backs into the initiative, give the example, carry it forward and accept the consequences.
- L: Links establish connections, are ambassadors and provide access to sources.
- S: Suppliers bring in their expertise, means and materials.
- U: Users avail themselves of the network for finding answers to their questions and for grounding their actions.

By means of network analysis we arrange the network around an initiative. The network analysis provides a snapshot of a living and dynamic network within which everything that is involved repeatedly (re)arranges itself and positions of involvement can shift. Involvement starts with the initiative and the initiator and positions itself independently from formal functions. Others involved can occupy multiple positions. Some develop into partners or links, but involvement can also diminish. It is all about keeping track of the positions from which those involved act. It makes clear which steps need to be taken to reach the core. A network arises from involvement and that is no different than the initiative to learn something. Involvement in learning arranges itself around a specific learning initiative. Together with the learning initiative as core the network arises and by analyzing this we can visualize the network as a learning unit. We visualize the network and we can consciously act as network. The first lead is actually both the arrangement as well as the awareness of acting as network. The other leads connect to this network awareness and are dealt with below.

Communicating knowledge and acting as an example of a node

A second lead from which one can look at the network is that of knowledge and acting as an example of a node. Once we take that lead, we see not just one core surrounded by a network of involvement, but an area with nodes and connections, which regardless of their seize or capability give access to knowledge in a specific way. We then consider the network as an entity made up of nodes and connections, as an area of communication we too are part of as actors. This is sometimes referred to as a nodal network (Hemel, 2001; Castells, 2000). Boutellier speaks of a nodal universe (2011). Getting to know the network as an area starts with making contact, open conversations and inquiry into which nodes are available. In communication the nodes appear and connections are made. This way a knowledge infrastructure is created that makes knowledge available and in which knowledge flows. Castells (2000) distinguishes between a space of flows and a space of places. Space of flows concerns the virtual streams of information, capital and knowledge. Space of places regards the physical points of entrance and access as well as the actual infrastructure in between, a territory which is formed by a network of roads and cities (Hemel, 2001). A knowledge infrastructure is both physical and virtual. When we look at learning through this lead, we see that the network as a learning area emerges with a diversity of larger and smaller knowledge nodes and multiple connections in between. Nodes can be experts, teachers and knowledgeable laypersons, but also databases, organizations, universities, researchers and platforms as well as a concerned citizen or an employee who is actively engaged in an issue. The challenge is to ensure that the network as learning area is increasingly accessible by way of our communications, supported with means such

as the internet. This way a knowledge infrastructure is established in which everybody can wander, choose their own paths and from which they can draw when faced with issues.

Preparing effort and acting as an example of an environment

The third lead is the preparation of effort and acting as an example of an environment. Such an environment serves as an inviting and challenging space in which different initiatives and networks meet, explore understandings, experiment together, exchange, attune, and give shape to mutual relationships and meanings. This resonates with what Wenger (1999) coined communities of practice. Communities of practice are formed by people with a passion for or concern with their activities and who engage in a process of collective learning in a specific domain. They take part in joint activities and discussions, they help each other and share information. They build up relationships that enable them to learn from each other and develop a shared practice with a shared repertoire of means. However, similarities also beg for further investigation into differences. Most importantly, in this lead we do not speak of bringing together people, but of bringing together initiatives and networks. Moreover, the use of a programme in the method discussed here is a separate (fourth) lead, in which turning something into a theme is a means to create an inviting space. A theme opens up the space and allows a diversity of related themes and networks to join and learn from each other. It is an invitation to align attention, prepare efforts with other networks while taking the respective initiative powers into account. Proper initiatives and networks together with the initiatives and networks of others make up the collective effort for a theme. Allowing others to explore the richness of the theme provides space for one's own initiatives. Turning something into a theme appeals for research, for a broad view and curiosity for everything a theme can entail. Cohn (1983) describes a theme as a manifold combination of all concrete and abstract factors that qualify for a connection with that same theme. She sees naming a theme as the capacity to unify obligatory affairs with the own curiosity of individuals and the world in case. A theme opens up space, but cannot do without initiative power. Initiatives and networks show different aspects of the theme. With the theme the actor creates a space to look at something from many angles and to define it in many ways, to align, to translate initiatives and bring them into a meaningful relationship.

Acting as an example of an environment is a reflection of the 'prepared environment', one of the most famous principles of Montessori (1949), who regards all activities of a teacher as preparation. The teacher and all he or she includes in fact is the environment. Montessori describes the teacher who prepares him or herself and next takes the position of an observer who is curious about and respectful towards phenomena and events. If the environment is prepared, then the child will go its own way. If the child does not do what we expected, then it is not the child that is mistaken, but we who should prepare anew. The teacher involves the learning child both literally and figuratively in the preparation by attuning to it and then letting it go its own way. The pedagogical philosophy of Dewey is similar in this respect (Dewey, 1916). According to Dewey, nurturing is aimed only indirectly at the child. It is the side effect of involving the child in the creation of a cultural environment and inviting it to undertake all sorts of joint activities therein.

Concentration and fine-tuning or alignment result in the coagulation of ties in the environment. Relationships tend to grow closer and more intimate. Boutellier (2011) sketches the image of a social ordering that emerges in a nodal universe. This can be our conscious choice, as a so-called temporary workable agreement (Wierdsma, 1999), but it can also be an unforeseen and undesirable consequence of our collaboration. The more the relationships coagulate, the more they speak up and the more difficult it becomes to handle new inputs and the dynamism of networks. Granovetter (1983) states that the formation of a network therefore needs 'weak ties' that are the bridges to new relations. If we held on to the relations as they were once formed, we could experience a complex problem. A complex problem is a warning sign that flags we should let go of our environment and prepare the effort from everything involved and known anew.

Facilitating potential and acting as an example of a programme

The fourth and final lead is the facilitation of abilities and acting as an example of a programme. Ambition is the aim to increase the network's abilities to handle issues. It must go from potential to reality.

A metaphor for the steps from potential to reality is cooking a meal. One can start from an attractive image of the end result and the initiative to get started with it. Next one forages the ingredients. However, one can also happen to have some or all of the ingredients and start from there, explore the possibilities. One can search for a recipe or an example, or experiment with the ingredients and figure out how what goes with what. One can just toss everything in a cooker and see what comes out, or carefully try out different combinations, see how the ingredients respond to one another and make an effort to do justice to them all. One can decide on the amount and sequence of meals and create a menu. One can take pride in maintaining kitchen supplies. And one can go even further and start a cooking show in which one initiates the public in the secrets and mysteries of the art of

cooking. Questions that keep coming up are, what do we let happen? What will we improvise? What will we prepare? Which routines do we have? What do we share with others? The final picture is a surprise which to some degree will bring us joy and new inspiration.

The metaphor shows that the leads are not only self contained and consecutive, but also operate in interaction and as a whole. With these characteristics, time and again a certain degree of coherence emerges in a network. If we translate the network into a programme, we see a tissue of layers, lines, episodes and moments in which parties act, knowledge arises, effort is organized and the ability of the network to handle issues evolves into strategies, improvisations, habits, and routines. Boutellier (2011) points out that ordering programmes demonstrate our desire to come to some sort of organization of an endless world. As one of our cases demonstrates, research programmes can fulfil a role in facilitating the coming about of a network as well (Hoogerwerf and Poorthuis, 2007). This case was one of the inspirations to start working with network programmes (Poorthuis, 2009). Working with a network programme is a way to increase the ability of a network to handle issues. One actor (as an actor network) starts a network programme with naming the theme, appointing the time slot in which he or she wants to work with the theme and an initial theme analysis. This enables the actor to order everything that is involved with the theme. Next, the actor enkindles the conversation about the theme broadly, is curious and invites everybody to partake in that conversation. The actor analyses networks and goes to look for examples and initiatives. The actor designs a network-programme line that includes meeting moments, also making use of others' activities such as seminars and festivals. Occasions to meet support the conversation about the theme, bring initiatives and networks together and render knowledge accessible. The actor uses a diversity of media to make visible everything that is involved with the theme, for instance exhibitions, the internet and newsletters. The actor concludes a network programme with a manifestation or event in which he or she, together with everyone involved, closes the theme and makes tangible what has been built in the allotted time. The network programme is a framework that supports the proper organizing abilities of the actor and his or her network and with which every actor can shape development in his or her own way.

Applying the leads

Below I describe several practices in which actors apply the previously described leads and experiment with the organization of learning in a networked context. These examples enable me to elaborate the organizational aspects of learning in a networked context. I assume that actors can take the four leads and their mutual interdependency and dynamism to organize learning in a networked context. The cases demonstrate to what extent learning actually takes shape and which new questions should be addressed.

The Networked Learning School

This example showcases a secondary school that was founded six years ago and that, inspired as it is with networked learning, wants to build a proper school concept. Networked learning was perceived as an interesting vantage point as it seemed to connect with developmental theories that depart from initiative power. This case is about the team managers. Each team manager organizes with a team of teachers the learning environment for a specific group of students. In this, they take the entrance, passage and exit of students as separate points of departure for organizing learning. The question of the team managers is how to take teachers along in the networked learning method without imposing it. Particularly, they want to invent how to co-create with the teachers an attractive environment for students. The team managers have undertaken several actions. For instance, in work conferences, team sessions and individual guidance sessions network analyses (see above) were made regarding current themes. This raised the awareness that it might be helpful to look beyond the teams per se and see what was available in the school at large. Some teachers took up a mediating role and became links. It is noteworthy that examples of networked learning were discovered and shared continually. Still, networked learning had not yet gained a visible identity of its own. A genuine breakthrough came with the invention and implementation of the so-called Thursday-afternoon structure. This was for teachers a chance to meet, to enter in conversation, to form networks around initiatives and to focus their joint attention on the students. The Thursday afternoons have a flexible structure with a programme that is designed weekly. The Thursday-afternoon structure in the Networked Learning School is an example of making the networked context a physical context that can be shared with others. An environment was created for teachers (and in the future possibly parents and students as well) to meet, exchange, and learn. A weekly programme was designed to engage in conversations and to identify and deepen themes. What makes the Thursday-afternoon structure special is that the team managers deliberately attempted to make the steering framework tangible and that this has resulted in a striking design.

Within this structure networked learning can be the topic of the conversation and it is apparent how business as usual it is becoming. Involving colleagues, but also parents and students, is increasingly self evident. Phrases as

'depart from initiative power' and 'to turn something into a theme' become part and parcel of everyday vocabulary and the conversations on the themes gain in attention.

Issues

Building a networked context demands a lot of consistency. Organizing a networked context for learning is no sine cure. A remaining issue is how team managers deal with schedules and assignments. Initiative is frustrated by the routine of allotting hours for tasks. Many teachers will not take initiatives without a time budget. Sometimes initiatives are discouraged by a narrow task description, real or perceived as such. How to overcome this impasse?

Network programme Regarding Youngsters

In five Dutch cities youth workers started network programmes to create a constructive collaboration with youngsters (Poorthuis, 2010). Their network programmes have four specific goals: stimulate and support the initiative power of youngsters, use network strategies to recreate the urban area/city as an environment that is accessible for youngsters, contribute to a new perspective on youth work in the urban area/city, and shape a new profession for working with youngsters together with everyone involved. We consider this example through the eyes of the youth workers, who organize their work with a network programme as their guide. The youth workers start a network programme from a current theme. Notably, the conversation about a current theme renders working with youngsters in the urban area or city more visibility in itself. The conversation and the organization of network analysis with youngsters and for instance entrepreneurs and politicians has given a positive impulse to the contact between youngsters and their environments. Relationships are built and a jointly told tale is emerging. We use narrative research to actively reinforce the positive effects of this jointly told tale (Basten 2011).

Issues

In this networked context, the learning of youngsters, environment, municipality as well as professionals deserves attention. There is a big discrepancy between youth work via network programmes and the task as assigned by municipality. The latter is concerned with problems or measurable results. However, if a problem, for instance 'nuisance', and not a constructive theme is pivotal, then everything will revolve around that problem. How to reframe the issue so that it opens up a world of opportunities?

Deventer Durably in Conversation

Under the header of Deventer Durably in Conversation a conversation about sustainability was organized in the city of Deventer (Poorthuis and Hoogerwerf, 2008). Via this conversation a large network of residents, organizations and other parties involved has been built. This network served as the basis for developing a future scenario for sustainability. The idea for the conversation had been launched by two self-employed network programme leaders and the choice for the theme came from a civil servant and the mayor. The latter also took care of financing the programme. Deventer Durably in Conversation was organized as a network programme. The two network programme leaders went looking for initiatives and entered the conversation with a plethora of parties involved. In the process, they invited everybody to consider sustainability as a common theme to which everyone could attribute in their own way. The conversation was started, taking initiatives was stimulated, network analyses were made, networks were built, relationships were established, and support was generated. The results of this constructive works were a sound, yet dynamic basis for sustainability in the city and a fertile soil for everyone who had something to do with sustainability. This was realized by explicitly identifying the links in the network (see the network analysis model) and by taking the civil servant and the mayor as carriers of the theme along in the process. The network programme Deventer Durably in Conversation was well received and was even awarded with a price from a political party. In the city the ambition was expressed to use network programmes to establish a tradition of city-wide conversations about societal themes, in which it is self evident that people meet, exchange, and are curious about diversity. The civil servant and the mayor indicated that they were nourished by this experience and that now they have the courage to enter conversations with citizens in a much more open and broad way.

Issues

The network programme leaders put forward links to stimulate involvement in the network and access to knowledge. Although there is a great interest in the organization of theme-based conversations, building networks using the positions of involvement is not self evident (yet), nor is keeping the themes up to date. How to come from theme to routine?

Women for Water partnership

Women for Water stimulates local initiatives in water and sanitation via the strength of women. This programme supports the building of networks for local initiatives and organizes regional work conferences. In these conferences, participants collaboratively examine cases and explore and prepare solutions. Women for Water is a world-wide network of women's organizations that aim to bundle their strengths and to learn from each other. A joint database enables them to share approaches and methods. One example (Poorthuis, 2008) is the method that was used in the preparation of a regional work conference in Southeast Africa.

Women from seven countries in Southeast Africa met and started with analyzing networks of local initiatives. The aim was to get a clear view of the links that were to be invited for the regional work conference. The before-mentioned network analysis model (Poorthuis, 2003) helped to identify these links and other parties involved regardless of formal positions and existing power balances. That helped to envisage new possibilities and relationships. Next, the local contacts were briefed with the invitations for the work conference. In a work conference the local initiatives in a region, in this case Southeast Africa are central. Besides local networks, partners from different parts of the world visit each others' work conferences to share their experiences and profit from the exchange. Together with the local networks, these partners address and explore the local initiatives, and join their efforts to develop approaches and find solutions.

Issues

Key is the increase of capacities and empowerment. Still, a lot of partners remain dependent upon the Dutch secretary. Can initiative power and entrepreneurship be stimulated more fundamentally or is the political situation in the countries concerned such that the support of a third, neutral country is necessary?

Networks in Animal Husbandry

Networks in Animal Husbandry is an approach in which networks of entrepreneurs in the cattle-breeding business and other parties involved take initiatives in and contribute to a sustainable and innovative sector. This approach was developed between 2004 and 2007. It was financed by the Dutch Ministry of Economic Affairs, Agriculture and Innovation and was part of a research programme of the Wageningen University. From this research programme a method emerged that we now call 'Networks with free actors' (Wielinga et al., 2007). A free actor actively boosts the vitality of a network and consistently steers on the energy and the connections within the network. The free actor has at his or her disposal a set of basic tools, among which the previously mentioned network analysis model (Poorthuis, 2003). Besides the development of this method for free actors, other initiatives were taken in Networks in Animal Husbandry to ground and preserve the results of the programme. One of the initiatives was a small-scale inquiry into how networks in animal husbandry can become a tradition (Hoogerwerf & Poorthuis, 2007). The research showed that the role of the program itself, and especially the organization of coherence was pivotal in this approach.

Issues

Following the research programme a regulation 'networking in animal husbandry' was brought into being which enabled entrepreneurial cattle breeders to finance networks initiated for sustainable animal husbandry. Wageningen University is an important knowledge node and via Wageningen University other networks of involved parties come into sight. Despite the fact that 'networking in animal husbandry' stimulates entrepreneurship and innovation, at the level of the sector it does not have its own position and does not go beyond the example. This raises the issues how administrators can become clear examples in the sector themselves.

Concluding remarks on organizing networked learning

In this paper I have constructed a steering framework for the organization of networked learning. Reflecting on the value of this framework for the craftsmanship of steering actors, we see that the acts of organizing and learning coalesce. The actor in a networked context learns by way of organizing and therewith to become an example. We can master the art to steer our own networked context through the act of organizing. Seen this way, the steering framework is a framework for everyone who acts in networks. Latour (2005) points out that each and every one of us is embedded in and acts in networks. This means that we all have to deal with the issue of steering our networks. To complicate matters further, we could say that every actor in a network establishes relationships with other actors, who in turn steer their own networks. The invitation of the youth workers to youngsters in the urban area or the invitation of the team managers to the teachers to take initiatives and involve their networks therein, is in fact an invitation to all those involved to steer on the relationships in their networks and to start handling their own steering frameworks. This all starts with the desire to become an example as a

youth worker or a team manager. The value of the steering framework is that we can give this 'being an example' an explicit status which enables us to explore it and share with others. The steering framework supports learning to organize and relating to others who do the same. It therefore supports the capacity to handle issues. Whilst handling issues, we see new questions emerge. A question is really the answer the use of the steering framework provides. With this framework, the actor as it were prepares the question in the networked context. The very first beginning is to go and stand amidst the networked context and start to order everything that is. It is interesting that without being defined as such, learning appears as a consequence of organizing a networked context. The acts of ordering networks, positioning nodal points and creating inviting and challenging relationships as well as the coherence of a programme provide a networked context in which learning is self evident and manifest.

References

- Basten, F. (2011) Microstructures as Spaces for Participatory Innovation. In J. Buur (ed.) PINC 2011: Participatory Innovation Conference Proceedings, University of Southern Denmark, 13th - 15th January 2011 (130-136).
- Bateson, G. (1977) *Mind and Nature. A necessary unity.* New York: Dutton, 1979.
- Boutellier (2011) *De improvisatiemaatschappij. Over de sociale ordening van een onbegrensde wereld.* [The improvisation society. On a social ordering of an endless world.] Den Haag: Boom Lemma uitgevers.
- Boutellier, H. (2007) *Nodale orde: veiligheid en burgerschap in een netwerksamenleving (oratie).* [Nodal order: security and citizenship in a network society (inaugural address).] Amsterdam: Vrije Universiteit.
- Castells, M. (2000) *The information age: Economy, society and culture. Vol.1: The rise of the network society.* (1st edition 1996) Oxford: Blackwell.
- Cohn, R. (1983) *Van psychoanalyse naar themagecentreerde interactie. Basisteksten.* [From psychoanalysis to theme-centred interaction. Basic texts.] Soest: Uitgeverij Nelissen.
- Dewey, J. (1916) *Democracy and Education. An introduction to the philosophy of education (1966 edn.).* New York: Free Press.
- Granovetter, M (1983) *The strength of weak ties: a network theory revisited.* *Sociological Theory, Volume 1,* 201-233. New York: American Sociological Association
- Hemel, Z. (2001) *Nieuwe vormen van complementariteit binnen stedelijke netwerken.* [New forms of complementarity in urban networks.] Den Haag: RPD/Forum.
- Hoogerwerf, L. & Poorthuis, A. (2007) *Netwerkraditie in de veehouderij.* [Network traditions in animal husbandry.] Wageningen UR.
- Latour, B. (2005) *Reassembling the Social. An introduction to Actor-Network-Theory.* Oxford University Press.
- Montessori, M. (1949) *The absorbent mind.* New York: Dell (1967 edn.)
- Poorthuis, A. (2010) *Werken met het netwerkprogramma ivmJongeren.* [Working with the network programme Regarding Youngsters.] Kortenhoef: Eigentijdse Verbindingen.
- Poorthuis, A. (2009) *Tussen potentieel en praktijk.* [Between potential and practice.] In G. Smid & E. Rouwette (Eds.), *Ruimte voor onderzoekende professionaliteit.* [Room for Researching Professionalism.] Assen: Van Gorcum.
- Poorthuis, A. & Hoogerwerf, L. (2008), *Netwerkverkenning Deventer. Duurzaamheid als kracht van de stad.* [Exploring the Deventer network. Sustainability as an urban asset.] Kortenhoef: Eigentijdse Verbindingen.
- Poorthuis, A. (2008) *Women for Water and the Power of Networking, an introduction to Functional Networking for partners in sustainable development.* Den Haag: Women for Water.
- Poorthuis, A. (2006) *De kracht van netwerkbenadering.* [The force of network approach.] Assen: Van Gorcum.
- Poorthuis, A. (2003) *Betrokken bij innovatie. Afstudeeronderzoek.* [Involved in innovation. Master thesis.] Utrecht: Universiteit.
- Schomakers, B. (2005) *Aristoteles, Metafysica (Metaphysics).* Boek I-VI. Budel: Damon.
- Wenger, E. (1999) *Communities of practice. Learning, meaning, and identity.* Cambridge: Cambridge University Press.
- Wielinga, E. & Zaalmlink, W. (2007) *Networks with free actors. Encouraging sustainable innovations in animal husbandry by using the FAN approach (Free Actors in Networks).* Wageningen UR.
- Wierdsma, A. (1999) *Co-creatie van verandering.* [Co-creation of change.] Delft: Eburon.