

Unraveling networked learning initiatives: an analytic framework

Citation for published version (APA):

Rusman, E., Prinsen, F., & Vermeulen, M. (2016). *Unraveling networked learning initiatives: an analytic framework*. Paper presented at Tenth International Conference on Networked Learning 2016, Lancaster, United Kingdom. <https://networkedlearningconference2016.sched.com/event/6byo/unraveling-networked-learning-initiatives-an-analytic-framework>

Document status and date:

Published: 10/05/2016

Document Version:

Peer reviewed version

Document license:

CC BY-NC-ND

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

<https://www.ou.nl/taverne-agreement>

Take down policy

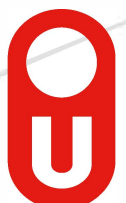
If you believe that this document breaches copyright please contact us at:

pure-support@ou.nl

providing details and we will investigate your claim.

Downloaded from <https://research.ou.nl/> on date: 07 Feb. 2025

Open Universiteit
www.ou.nl



Unraveling networked learning initiatives: an analytic framework

Ellen Rusman, Fleur Prinsen & Marjan Vermeulen

Welten Institute – Center for Learning, Teaching and Technology
Open University of the Netherlands

10th of May 2016, Networked Learning Conference, Lancaster

Welten Institute
Research Centre for Learning, Teaching and Technology

Open Universiteit
welten-institute.org



Why an interest in networked learning and learning networks? (1)



- From an academic perspective: gaining knowledge and insight
- From a practice perspective: increased interest in various professional practices to initiate learning networks or engage in networked learning



<https://usaidearn.org/>



<http://www.learningnetwork.ac.nz/share/home.aspx>



The Joint Learning Network for Universal Health Coverage (JLN) is a peer-to-peer learning platform for policymakers and payers in low- and middle-income countries striving to finance universal coverage of their populations' health care needs. The JLN

<http://www.ihit.org/Engage/initiatives/Completed/JLN/Pages/default.aspx>

Welten Institute

Research Centre for Learning, Teaching and Technology

Unravelling networked learning initiatives- a framework

Pagina 2

Open Universiteit
welten-institute.org



Why an interest in networked learning and learning networks? (2)



- Potential for solving complex, transboundary problems and developing transboundary competence (de Kraker et al, 2007; Lansu et al., 2010): to successfully contribute to [sustainable development] it is the ability to think, communicate, learn and collaborate across the boundaries that divide different perspectives on a situation
 - Innovating existing practices and accelerating adoption (Valente, 1995): ‘linking’ ties (connections outside an organization) are most innovative (De Jong (2010) in Ehlen, 2015, p.39)
 - Facilitating and harvesting the creativity of participants, facilitating co-creation of new artefacts
 - Facilitating collaborative, social learning and knowledge co-construction (Stahl, 2006)
 - Application in formal (structured, institutionalized), non-formal (intentional learning outside formal educational institutes) as well as informal (‘accidental’, unintentional learning, happening in the course of employing other activities) learning contexts (Goodyear & Carvalho in Sloep (in press); Dohn, 2014)
- => insight into what successful networked learning initiatives look like by merging two research traditions that both extensively research learning in networks, namely 'networked learning' and 'learning networks'.





Networked learning



Learning network

Welten Institute

Research Centre for Learning, Teaching and Technology

Unravelling networked learning initiatives- a framework
Pagina 4

Open Universiteit
welten-institute.org



Networked learning:

“...learning in which information and communications technology (ICT) is used to promote connections: between one learner and other learners, between learners and tutors; between a learning community and its learning resources” (Goodyear, Banks, Hodgson, & Steeples (2004))

Goodyear & Carvalho (2014) conducted a survey of a variety of definitions and according to Sloep (in press) concluded that any satisfactory definition of networked learning should (p.42) :

- 1 allow one to individuate a learning network, i.e., discern instances from each other;
- 2 avoid the use of language that is customary in formal education;
- 3 emphasize technology as well as people; and
- 4 mention the individual as well as the collective.

Welten Institute

Research Centre for Learning, Teaching and Technology

Unravelling networked learning initiatives- a framework

Pagina 5

Open Universiteit
welten-institute.org



Learning networks

- *'a particular kind of online, social network that is designed to support non-formal learning [outside the context of formal, institutionalized learning] in a particular domain'. (Sloep & Kester, 2009, p.17)*
- **Learning** more about this area of interest **is the explicit intention** of all individuals that populate a learning network
- A learning network is seen as **an artefact that can be designed** in order to foster interaction amongst and a learning process 'within' its participants. Technology helps to shape a socially constructed unique 'place' or 'constellation', customized to needs of its inhabitants
- Designed services provide functionality to support necessary and desirable learning, problem solving and social processes (constituting affordances: instruments and services affording actors an opportunity to take an action) (Berlanga, Rusman, Bitter-Rijpkema & Sloep, 2009)
- "heterogeneous assemblages of tasks, activities, people, roles, rules, places, tools, artefacts and other resources, distributed in complex configurations across time and space and involving digital, non-digital and hybrid entities" (Goodyear et al., 2004)
- "a social network as a designed object implies that there are people who are its creators, members and facilitators" (p.13)" (Rajagopal (2013))
- learning networks can be created, maintained and activated at different levels, e.g. as an individual, a group or as an organization

Welten Institute

Research Centre for Learning, Teaching and Technology

Unravelling networked learning initiatives- a framework

Pagina 6

Open Universiteit
welten-institute.org



Proposed definitions

networked learning initiatives:

- goal-directed, interest-or need based, collective activities of a group of (at least three) individuals, that initiate interaction across the boundaries of their regular social systems

learning network:

- the precipitation of interaction processes between actors and resources in a network, looking at concrete results in terms of both 'grown'/fostered or (partly) designed 'constellations' of network ties, structures and resources supporting interactions

Welten Institute

Research Centre for Learning, Teaching and Technology

Unravelling networked learning initiatives- a framework

Pagina 7

Open Universiteit
welten-institute.org





Networked learning



= How to foster

Networked learning processes?



Learning network

Welten Institute

Research Centre for Learning, Teaching and Technology

Unravelling networked learning initiatives- a framework

Pagina 8

Open Universiteit

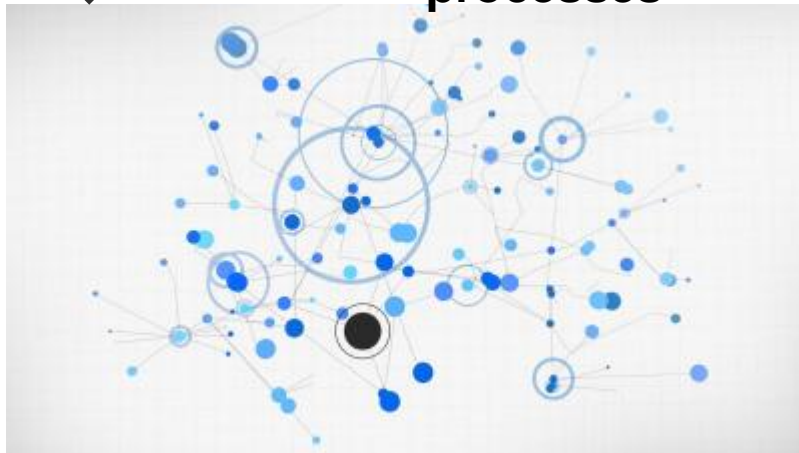
welten-institute.org





=

**Fostering
Networked learning
processes**



However:

- networked learning can only be fostered until a certain degree: 'practice' is dependant on people involved
- no standard 'constellation' of people, roles, rules, tools and artefacts; not all successful networks will have the same characteristics (de Haan, Leander, Ünlüsoy & Prinsen, 2014)

Welten Institute

Research Centre for Learning, Teaching and Technology

Unravelling networked learning initiatives- a framework

Pagina 9

Open Universiteit
welten-institute.org



Gaining further insight



However, there are still indications that some network structures work better than others

Therefore we propose to:

- describe the various network 'constellations' by means of a consistent framework
- measure participants' perceptions of a network's success in terms of learning, knowledge co-construction, social and/or problem solving processes
- find the factors that foster a successful networked learning experience through the facilitation of important networked learning processes

Welten Institute

Research Centre for Learning, Teaching and Technology

Unravelling networked learning initiatives- a framework

Pagina 10

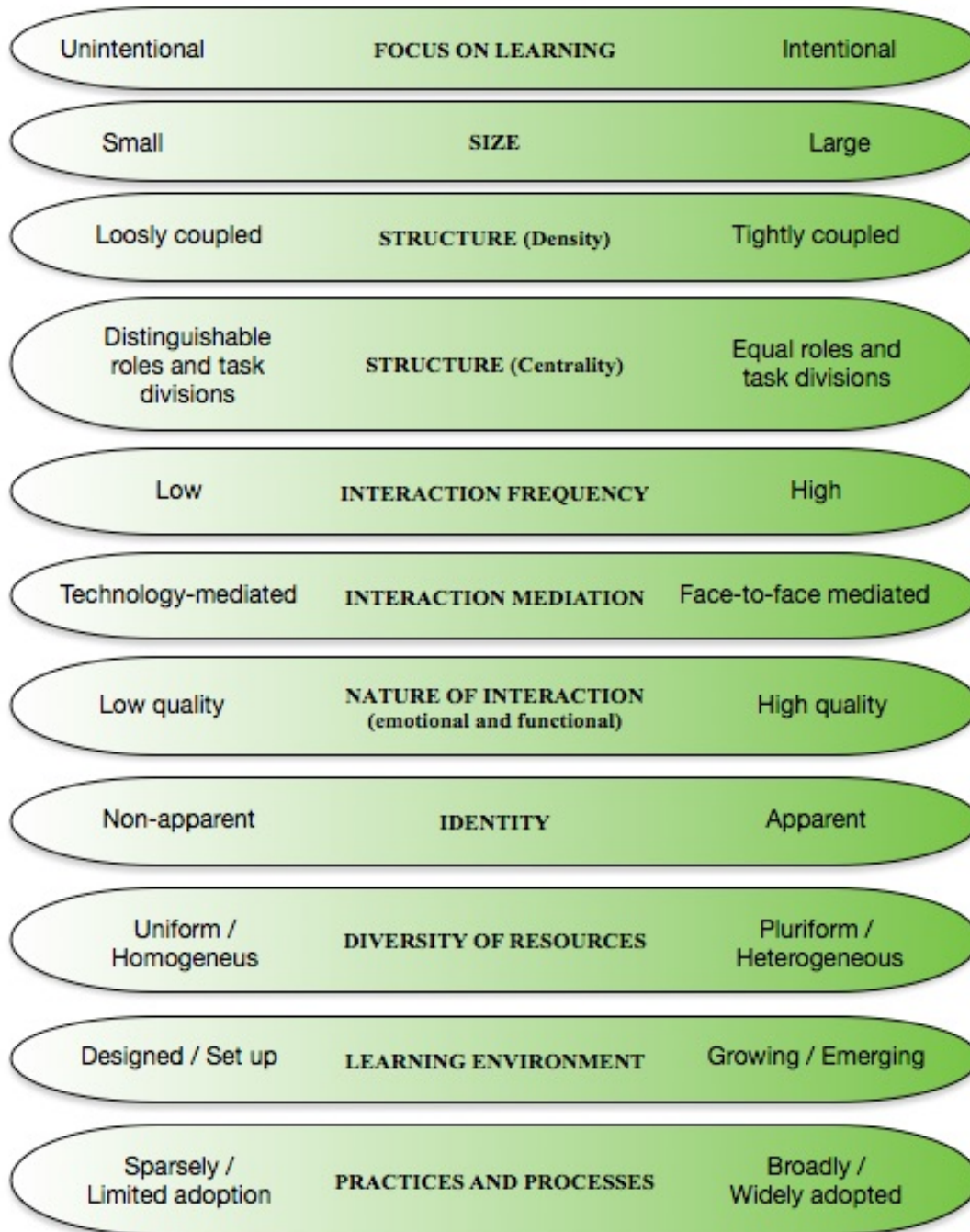
Open Universiteit
welten-institute.org



The constellation of a learning network is dependent on:

- **characteristics of individuals in the network**, encompassing both their *personal characteristics* (e.g. personal values, norms and expectancies, personality and expertise) and their social backgrounds; their *sense of belonging and embeddedness in their regular social systems* (e.g. an organization (unit), profession, or family, each with their own ways of doing/accepted 'practices') which are driven by common views on the kinds of appropriate and expected behavior.
- **characteristics of interpersonal relations and other interactions in the network**, in terms of their experienced communality, solidarity and involvement (e.g. in shared values, norms, beliefs, expertise, motivation), interpersonal trust, interdependency and reciprocity, appreciation of each other, and their shared practices ('mutually adopted ways of doing things'), including using certain types of language, (technology-enhanced) tools or instruments
- **how the group of individuals succeed in making their own place out of a space** (Harrison & Dourish, 1996)



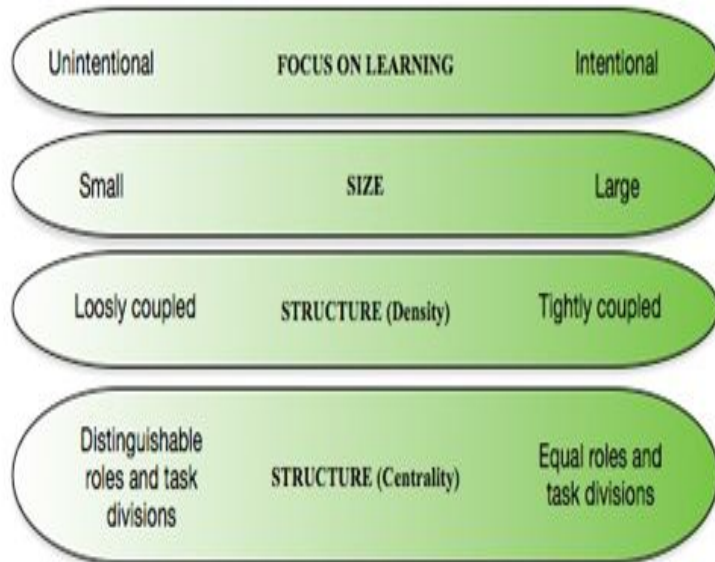


Analytic framework

precipitated (visible and concrete over time) elements of a learning network's constellation



The dimensions (1)



focus on learning: achieving learning objectives in a more or less structured way is the explicit intention of individuals joining the learning network (non-formal, intentional learning) or individuals join for other reasons (e.g. jointly solving a societal problem, for fun) and learn accidentally in a not-for-learning designated, unintentional way (informal learning)

size: size of a network is partly dependent on how individuals are approached to participate in networked learning, their geographical proximity and whether or not the network is technology-enhanced. It can fluctuate from 3 (small) to an (theoretically) indefinite number of people. The size partly determines the number of opportunities individuals have to learn from each other, and the amount of available resources.

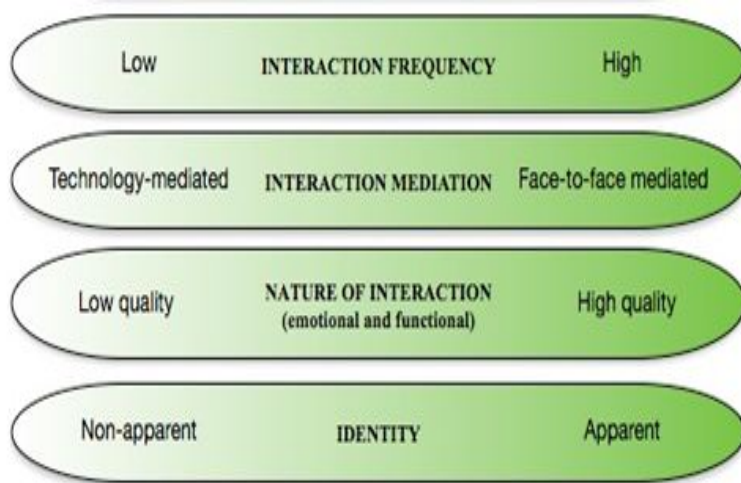
structure:

density: proportion of direct ties between individuals in a network. Indicator for the level of familiarity with each other in the network, whether or not the network thrives on equal or hierarchical relationships, and the amount of non-redundant information and knowledge consolidation taking place. It also illustrates the composition of the whole ecosystem: are there dedicated, specialized 'units' (clusters) of individuals providing (irregular) input to the rest of the network, or is everybody exchanging with everyone reciprocally.

centrality: number and type of interactions that 'pass' (through) a certain individual tells something about their position and role in the network. It can be an indicator of the history of the network, when viewed upon in time, where the pattern will be different for an designed or 'grown' network; it can tell something about strong versus weak or distributed leadership or whether or not clear task or role divisions are applicable in the network



The dimensions (2)



interaction frequency: number of interactions between individuals. It can indicate whether the network is active or dormant, whether interaction is regular or irregular, whether it is facilitated (e.g. in terms of available time to spent in the network) and it can tell something about the phase or process a network is in. Is it a temporal or structural network? Does it have a short or long shared history and practice? Are the individuals currently solving a specific problem (momentum), do they experience a peak (or flaw) in their work? It can also tell something about a special event or circumstance an individual experiences, e.g. illness.

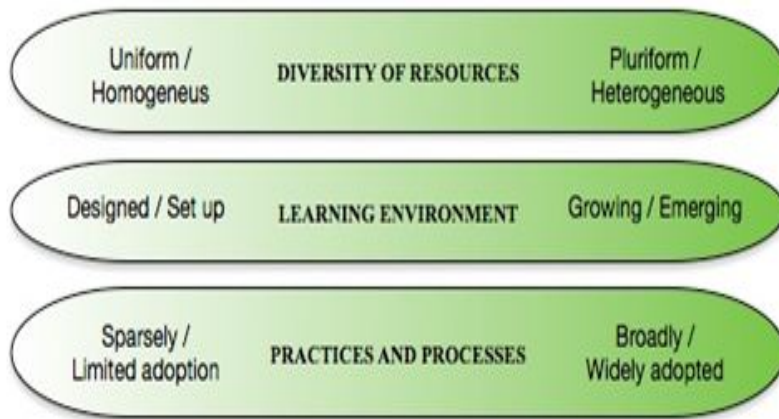
interaction channels: type of channels/facilities/mediation individuals use to interact. Is it online or face to face? Do they have a (physical/technology-enhanced)(owned) place to interact or not? (e.g. a project/ meeting room). The type of channel used is partly related to how individuals are located in time and space and whether or not it is a 'within' organization or 'between' organization network.

nature of interaction: type of emotional and functional interactions in the network, individual's responsiveness to each other and the perceived quality of interactions can influence 'felt' strength and type of relationships (e.g. friendship- or expertise-based) individuals experience in the network. These relationships are not univocally derivable from the frequency of interaction. One perceived valuable interaction with an individual may influence a relationship more than ten worthless interactions.

identity: apparition/visibility of individual and collective identity (e.g. by means of profiles, visible social traces/footprints, focus of resources in network, group identifier, like a logo) in a network can foster interpersonal trust (Rusman, 2011) by providing information on the personality, experience and motivation for participation in a network; awareness of each other and mutual engagement that binds the members of a network together in a social entity. It may influence the solidarity and connection an individual feels with the network and can provide a feeling of belonging



The dimensions (3)



resources: variability of the nature, composition and type of resources (knowledge, used language/stories, discourses, skills, people/perspectives becoming part of a networks' 'social capital') influences the range of possible (valuable) interactions an individual may encounter in a network. The homogeneity or heterogeneity can tell something about how focused or dedicated a network is, but also about its learning opportunities. Complementarity (in terms of expertise as well as personality) of individuals can foster learning, whereas equality fosters reinforcement of what you already know or capable of (Rajagopal, 2013). The type of language used in the network influences the mutual understanding and grounding process individuals go through.

learning environment: whether or not a learning environment (with tools, policies (rules, regulations, agreements) services, artefacts) is set-up from the start of interaction (designed) or not (grown into a social place through negotiation in interaction) can tell us something about the history of a network, e.g. by which actors it was initiated or determined (individuals, group(s)).

practices and processes: whether or not there is a widely adopted and accepted way of working together within the network may tell something about the social capital (Ehlen, 2015) the network has succeeded to build.



What next?

- Framework introduces an analytic way to look at and understand the precipitation of networked learning initiatives: learning networks. Learning networks are positioned as a visible and concrete 'precipitation' of the processes characterizing networked learning initiatives over time.
- Apply the framework on a teacher professionalization case in Dutch secondary education. In this case, learning networks are used with the intention to support teacher professionalization across schools, within a certain domain and/or school level



Welten Institute

Research Centre for Learning, Teaching and Technology

Unravelling networked learning initiatives- a framework

Pagina 16

Open Universiteit
welten-institute.org



Thanks for your attention!



Please ask now!

or mail us later:

Ellen.Rusman@ou.nl

Fleur.Prinsen@ou.nl

Marjan.Vermeulen@ou.nl

Welten Institute

Research Centre for Learning, Teaching and Technology

Unravelling networked learning initiatives- a framework

Pagina 17

Open Universiteit
welten-institute.org

