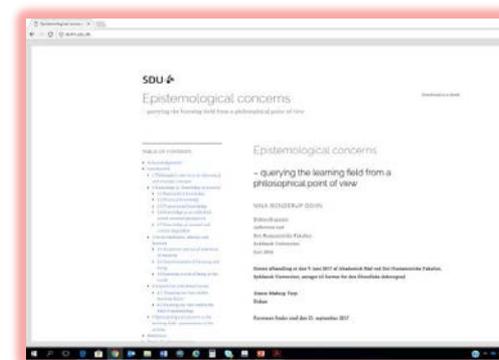
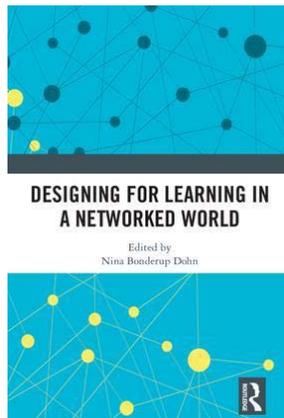
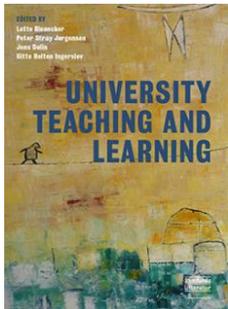


Knowledge and Competence for a Networked World

Creating Knowledge 2018, Vingsted, 7/6 2018

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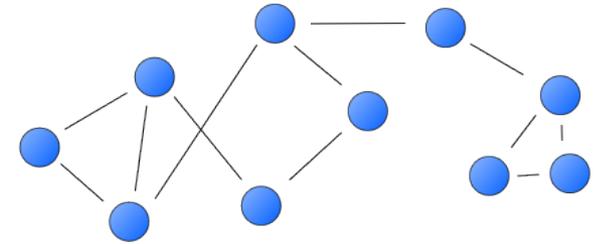
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Overview

1. Competence demands in a networked world /Nina, 25 min.
 - The world as networked
 - Characteristics of our networked world
 - Competence demands in a networked world
 - Discussion /15 min.
 - How do the demands play out in library practice?
2. What is knowledge and competence? /Nina, 25 min.
 - Analysis of 'knowledge in practice'
 - Discussion /15 min.
 - Knowledge in practice and resituation in library settings
3. Implications for design for learning of 'knowledge in practice'
 - Within information literacy (and beyond) /Nina, 5 min.
 - Questions and general discussion /5 min.

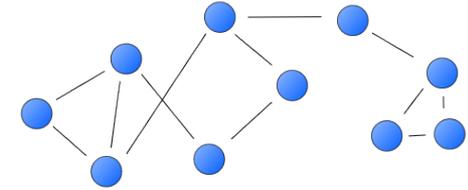
The world as networked



The world is networked in many senses:

1. People are connected to other people
2. Places around the world are globally connected
 - Through an infrastructure of computers (ICT)
3. Events and situations are connected to each other
 - Through individuals, organizations, ICT
4. Communication takes place in internet-mediated spaces
5. Our lives play out in hybrid physical-virtual spaces
6. Information management undertaken by machines
 - Algorithms and machine-machine interaction

The world as networked – in Higher Education and Research Libraries



1. People are connected to other people
 - Informal learning, knowledge creation, information seeking – for librarians, researchers, students alike
2. Local places are globally connected through ICT
 - (Potential) inspiration and learning across contexts
3. Events and situations are connected to each other
 - Making sense of *Creating Knowledge* in work practice
4. Communication takes place in internet-mediated spaces
 - Repositories, social media, fora, online courses, MOOCs
5. Our lives play out in hybrid physical-virtual spaces
 - Fake news, social media, info literacy: important to ‘physical life’
6. Information management undertaken by machines
 - Info access and retrieval not transparent to users

Characteristics of our networked world (1 of 4)

- Pervasive, integrative use of ICT in work and leisure
 - Continuously new ICT to be integrated (or not)
 - No-one is a 'digital native' to the ICT of adulthood
- Mobility of people in and out of contexts
 - Work, family, leisure, neighborhood, 'self-realization'
 - Lifelong and lifewide learning
 - Expectation, wish, demand – from oneself and others
 - Insecurity, lack of stability
 - Need for 'resituation' of competence to new settings

Characteristics of our networked world (2 of 4)

- Interweaving of physical and virtual spaces for action
 - ‘Networked’ understood as: life in hybrid spaces
 - Physical spaces integrate digital ones
 - The library’s layout and work functions are good examples
 - ”Seamless” use of information on the internet
 - Multitasking in many spaces at once
 - Spread of news – and fake news – on social media
 - Pick-up of conversation across spaces
 - Commitments, cultural and social capital, image
 - Significance of digital footsteps in future spaces
 - Communication; sharing and creating knowlegde

Characteristics of our networked world (3 of 4)

- Globalisation
 - Markets
 - International competition
 - Internationalisation of local workplaces
 - Mobility of workforce, global distribution of jobs and functions
 - Sustainability
 - Overpopulation, environment, consumption, social fairness
 - Standardization, loss of plurality and local difference
 - Linguistically, culturally, academically

Characteristics of our networked world (4 of 4)

- User involvement and user generation of content
 - Participatory culture
 - Shift in opinion formation (from expert to user)
 - Users become "producers", esp. in web 2.0 media
- The characteristics support & co-define each other, e.g.
 - Hybrid spaces are important facilitators of producers
 - Globalization supports (demands) mobility of people
- 2 important points about these characteristics:
 - To which extent do they apply to the Global South?
 - Humans create human society
 - Critical reflection on the characteristics' adequacy is needed

Competence demands in a networked world (1 of 4)

To adequately cope with the 'networked world' requires

- Disciplin knowledge – this demand is highly accentuated
 - Languages, science, humanities, social science

But my focus is on competence cutting across disciplines

- Critical assessment skills
 - Finding the right shoulders to stand on
 - Skills in assessing information, media, resources
 - Critical source evaluation
 - Understanding search algorithms, filter bubbles, fake news
 - Peer and self-assessment skills
 - both of processes and of products

Competence demands in a networked world (2 of 4)

- Skills in critically reflective, integrated use of computers
 - Competence in handling complex hybrid contexts
 - Perceiving the 'reach' of actions beyond here & now
 - Information search, web navigation
 - Knowledge sharing, knowledge creation
 - Adequate use of relevant ICT, learning of new ICT
 - Critical evaluation of what 'relevant ICT' is
 - Digital literacy
 - Communication, participation, multimedia production
 - Computational literacy
 - Computational thinking, computational participation

Competence demands in a networked world (3 of 4)

- Participation skills
 - Attunement to the concrete situation
 - Competence in perspective and focus shift
 - "Situated readiness" – anchorage in the situation
 - Resituation of knowledge to fit the specific situation
 - E.g. across academic and out-of-school settings
- Collaboration and intercultural skills
 - Attunement to local culture
 - Understanding, accept of difference, 'drawing the line'
 - Handling of conflicts and 'collaborating-anyway'
 - Local perspectives in a global world

Competence demands in a networked world (4 of 4)

- Innovation, new usage forms, new ideas
 - Creation of new knowledge, not reproduction
 - Reuse of knowledge in new ways
 - Resituation, contextualization
- Critical, visionary, ethical development of practice
 - "Changing characteristics to the ones we want"
 - Informed opinion formation
 - Reflexive self-perception, self-esteem, trust in others
 - Conscientious taking on of responsibility

Discussion slot 1 (10 + 5 minutes)

Discuss with the 2-3 persons closest to you:

- *How do the demands play out in library practice? Focus on one or two demand(s)*
 - *For you as librarian?*
 - *For researchers and students?*
 - *How can libraries and librarians support them in developing the necessary skills and competences?*

Handout page 1

Part 2: What is knowledge and competence?

- Three levels of competence demands
- Relation between knowledge, skill and competence
- Analysis of 'knowledge in practice'
- Resituation of knowledge across contexts

Three levels of competence demands

Competence demands at different analytical levels

- Domain level
 - Genre analysis, Dewey classification, linear algebra
- Activity level
 - Facebook chat, information search, reading, interacting with learning object, media production
- Life situation level
 - Course session, workplace, hobby, family life, exam/test

A situation presents a *unity* of competence demands

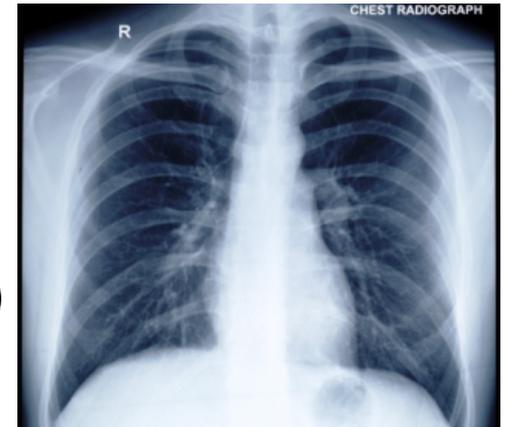
- Competence is learned in response to such unities
 - As a concretely realized unity of aspects
- It is decisive for learning outcome ...
- ... *which* unities learners meet

Knowledge, skill and competence

- Competence is learned as a concrete unity of aspects
 - Aspects of knowledge and skill
 - Bildung/dannelse is an aspect as well
 - Competence is acting adequately in the situation
 - "Acting adequately" inherently involves responsible conduct
 - ... No dichotomy here!
- I prefer the term 'knowledge in practice' to 'competence'

Analysis of 'knowledge in practice' (1 of 5)

- Example: diagnosis from an X-ray picture (Polanyi)
- Knowledge in practice is a unity of
 - Propositional knowledge (know that)
 - Skill (practical knowledge, know how)
 - Experiential knowledge (know of)
- Knowledge in practice is a perspective on the situation
 - ... allowing relevant traits to appear
 - ... and to appear with a certain kind of meaning
 - ... action-oriented meaning – inducing specific actions



Analysis of 'knowledge in practice' (2 of 5)



Qualifying the example:

- Domain: what is on the picture?
- Activity: the picture is taken in the process of diagnosing
- Life situation: Treatment of patient (part of work practice)

'Knowledge in practice' at all levels

- Domain: Seeing what is significant on the picture
- Activity: evaluating the significance of X-raying patient
- Life situation: competent treatment of patient
(participation in work practice)

Again: the perspective is *action-oriented*

Analysis of 'knowledge in practice' (3 of 5)

Example: Book a librarian

- Domain: finding relevant literature (level of X-ray picture)
 - Knowledge of search strategies, journals, focus areas
 - Skills in topic demarcation, navigating, evaluating
 - Experiences of finding/not-finding and assessing info
- Activity: guiding student (level of diagnosing)
 - Guidance rules of thumb, pedagogical knowledge
 - Communication and questioning skills
 - Experiences with students' problems and reactions
- Life situation: facilitation within education, part of work
 - Knowledge of informal (?) role in educational system
 - Skill in managing different obligations, "fitting it in"
 - Experiences of taking & demarcating responsibility

Analysis of 'knowledge in practice' (4 of 5)

Example: Book a librarian

- Domain: finding relevant literature
 - Activity: guiding student
 - Life situation: facilitation within education, part of work
-
- The situation presents a *unity* of competence demands
 - Librarian 'knowledge in practice' \neq sum of 'skill atoms'
 - Instead:
 - a perspective that provides *relevance structuring*
 - domain and activity are structured from life situation
 - and often vice versa
 - an *action-oriented* relevance structuring:
 - ... determines the specific way, the student is helped
 - ... and the specific literature identified (area, level, journal)

Analysis of 'knowledge in practice' (5 of 5)

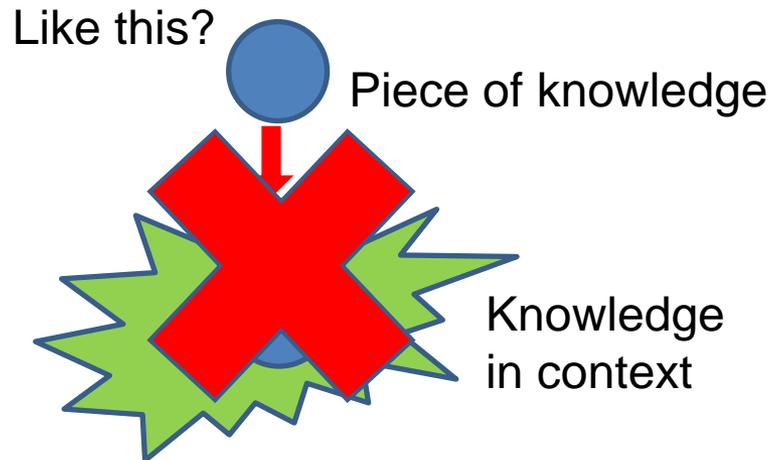
Example: Teaching a session within a subject course

- Domain: search strategies
 - Knowledge of search strategies, journals, focus areas
 - Skills in topic demarcation, navigating, evaluating
 - Experiences of finding/not-finding and assessing info
- Activity: teaching, presenting and evaluating tasks
 - Pedagogical knowledge – presentation, task preparation...
 - Pedagogical skills, integration of student input
 - Experiences with student reactions and misunderstandings
- Life situation: session in ongoing course (part of work)
 - Knowledge of course focus, role of session in course
 - Skill in integrating session as relevant for course
 - Experiences of making sessions relevant (or not)
- Again: a *unity*; relevance structuring from life situation

Resituation of knowledge across contexts (1 of 4)

Point from Part 1:

- In a networked world, we traverse many contexts
- We need to 'resituate' knowledge between contexts



Point from Part 2:

- Knowledge is learned as a concrete unity of aspects
 - In relation to the demands of the learning situation

Resituation of knowledge across contexts (2 of 4)

⇒ Resituation requires holistic transformation

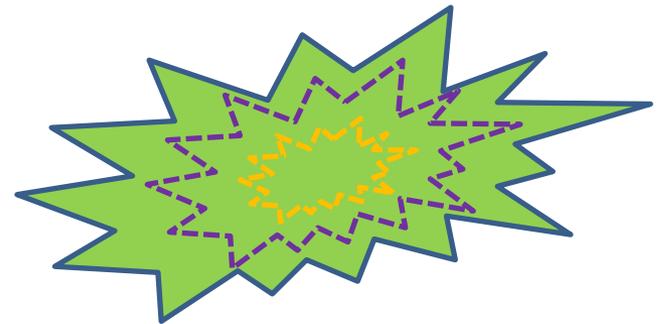
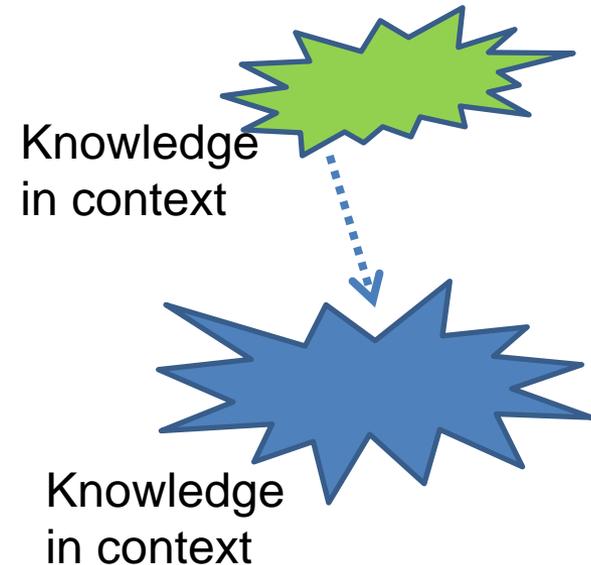
- Like this...

There will be some continuity

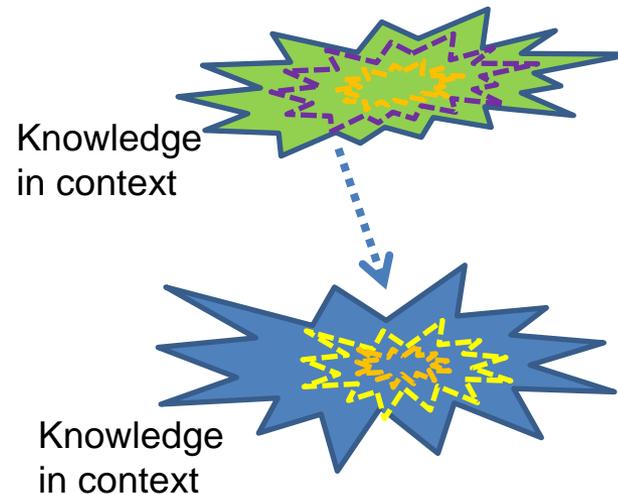
- But no pre-exempted 'elements'
- Non-predictability of *what* will change
 - and of how

Analyzable in terms of situational demands

- of domain, activity, life situation



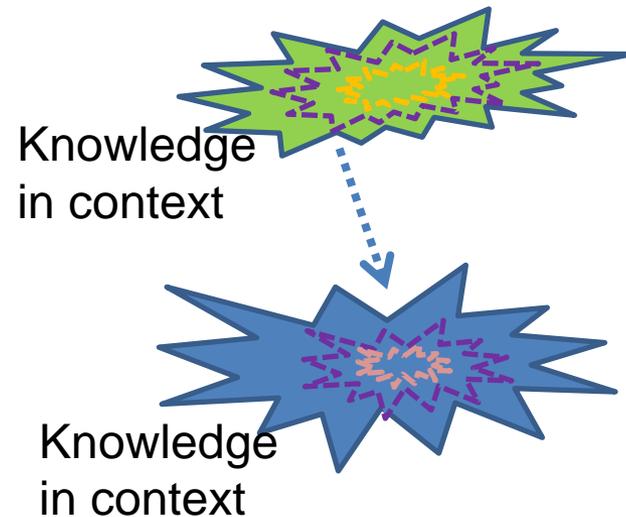
Resituation of knowledge across contexts (3 of 4)



Transformation of domain level knowledge

- Because of changed life situation and activity
- E.g. adaptation of search strategy domain knowledge
 - between 'book a librarian' and course session
- E.g. student adaptation of subject knowledge
 - between thesis and project report to company

Resituation of knowledge across contexts (4 of 4)



Transformation of activity level knowledge

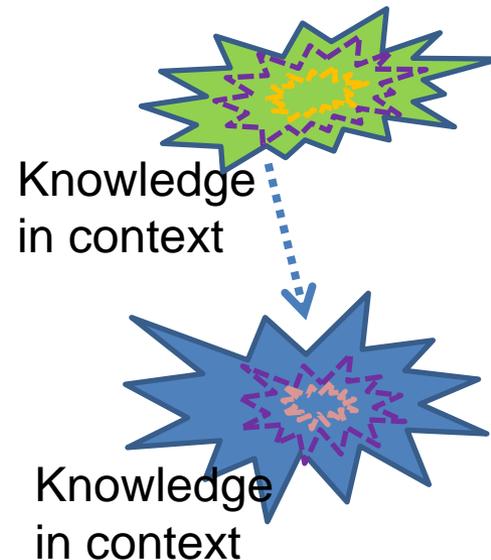
- Because of changed life situation and domain
- E.g. students adapting project work strategies and procedures
 - between Teacher Training BA and MSc in Web Communication
 - between 'book a librarian' and course session
- E.g. librarians adapting guidance knowledge
 - Between public library and research library

Discussion slot 2 (10 + 5 min.)

Discuss with the 2-3 persons closest to you, **either**:

1. *What would be further examples of 'knowledge in practice' in library settings?*
2. *How do you experience demands for resituation?*
 - *Of propositional knowledge, skills and experiences?*
 - *At domain, activity, and life situation level*

Handout page 2



Part 3: Implications for design for learning ‘knowledge in practice’

Within the domain of information literacy (and beyond)

- Implications of Parts 1 and 2 for what information literacy is
- Implications for design for learning information literacy
- Summing up

Information literacy for a networked world

Part 1 listed these competence demands:

- **Critical assessment skills**
- Skills in critically reflective, integrated use of computers
- Participation skills
- Collaboration and intercultural skills
- Innovation, new usage forms, new ideas
- Critical, visionary, ethical development of practice

Are they all relevant to "information literacy (and beyond)"?

Part 2 pointed out that

- A situation presents a *unity* of competence demands
- Competence is learned in response to such unities
- It is decisive for learning outcome *which* unities learners meet

So **critical assessment skills** will be learned situatedly

- Same for other 'networked world' skills

Designing for learning information literacy (1 of 2)

⇒ Information literacy is learned in unity with other skills

Which unity of competence demands is most relevant?

Approach 1:

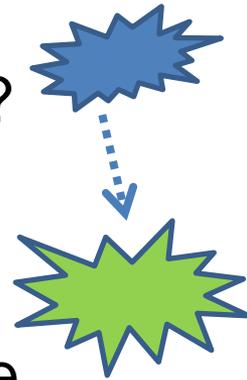
- The educational programme/course within it!
 - Domain: discipline knowledge
 - Activity: e.g. project work
 - Life situation: Taking the course/education
- Information literacy will be learned as discipline-specific
 - Highly relevant for students here&now
 - Also for future life "in the networked world"?
 - To the extent that the discipline is relevant?

Designing for learning information literacy (2 of 2)

Which unity of competence demands is most relevant?

Approach 2:

- The unity involved in resituating between contexts?
 - E.g. coupling student job and academic discipline
 - E.g. making sense of academic input in work context
 - Domain: job experience or specific topic
 - Activity: coupling perspectives
 - Life situation: making sense across contexts
- Information literacy will be learned as ‘participation skill’
 - Attunement to specific situation
 - Usefulness and adequacy of info is context dependent
 - Perhaps not so relevant for students here&now?
 - But for future life “in the networked world”?
- What would be the role of librarians in this?



Summing up

- Competence is ‘knowledge in practice’
 - An action-oriented perspective on the situation
 - A unity of propositional knowledge, skill & experience
- Competence demands for a networked world
 - **critical assessment, critical ICT use, participation, collaboration, innovation, practice development – info literacy (and beyond)**
 - The skills cut across disciplines
 - But are learned situatedly in concrete situations...
 - ... as part of the unity of ‘knowledge in practice’
- Different designs for info literacy support different unities
 - Course integration: educational anchorage/relevance
 - Context coupling: transgressing educational walls
 - Increasing the education’s relevance in a networked world?

⇒ *Question: What roles should librarians have in diverging learning designs for a networked world?*

Thank you for your attention 😊