Recent Work in Connectivism

Stephen Downes

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How Connectivism is Being Interpreted

- Nature of Knowledge
- Learning Process
- Network Formation
- Autonomy and Decision-Making

Table 12.1 Principles of connectivism.

1. Learner connects to a learning community. They benefit from it but also feed it with new information. Continuous dialogue between members.
2. A community is a node, part of a community of nodes that support a wider network. Networks encourage diverse, autonomous and creative knowledge building.
3. Diversity is strength. Knowledge resides within the individual; therefore, diversity of individuals in a network enriches the knowledge available to the learners.
4. Information/knowledge is constantly changing. The network acts as a filter, constantly evaluating what is of worth, to retain and circulate within the network.
5. Networks situated in the internet have access to diverse sources of information. Therefore, networks are inter-disciplinary by nature.

(Bowes and Swanwick, 2018)

How Connectivism is Being Interpreted

- Nature of Knowledge
- Learning Process
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- Autonomy and Decision-Making

(Kultawanicha, Koraneekija, and Na-Songkhlaa, 2015).

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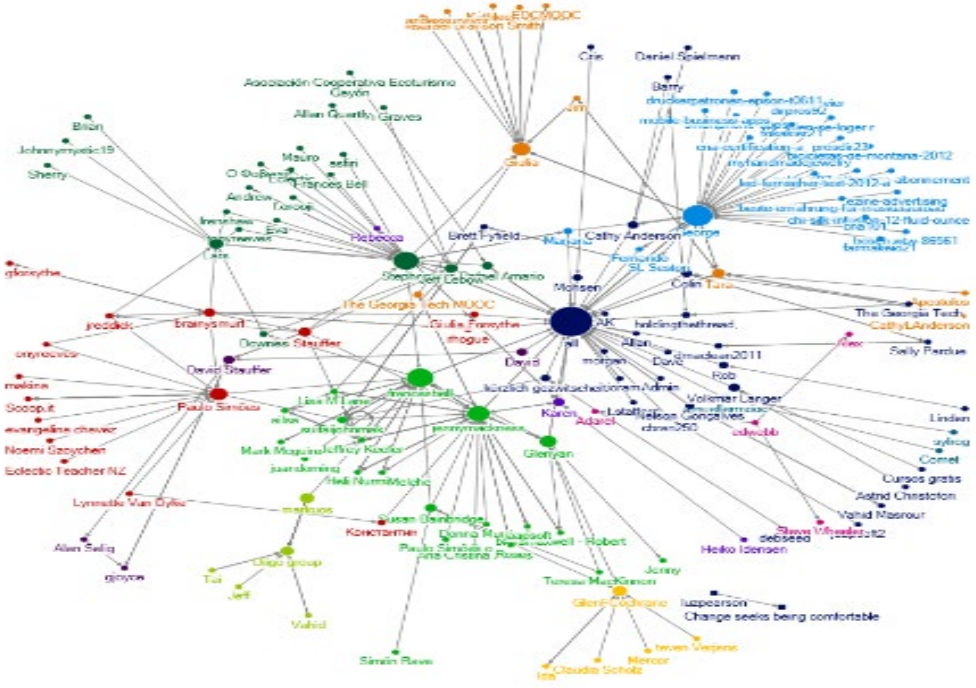
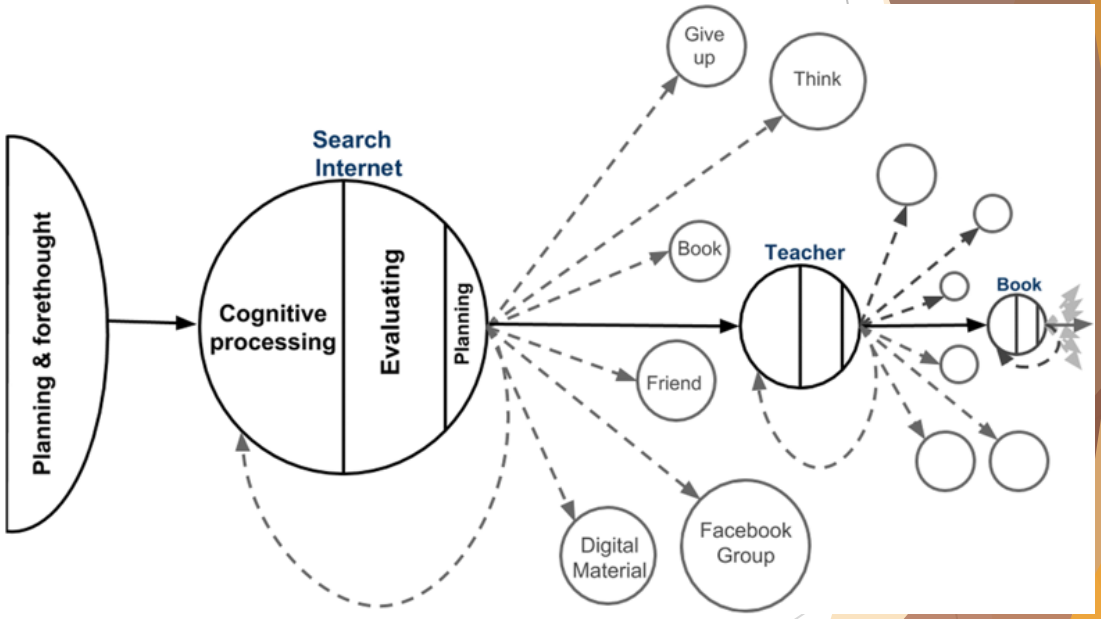


(Wang, Anderson and Chen, 2018)

Criticisms of Connectivism

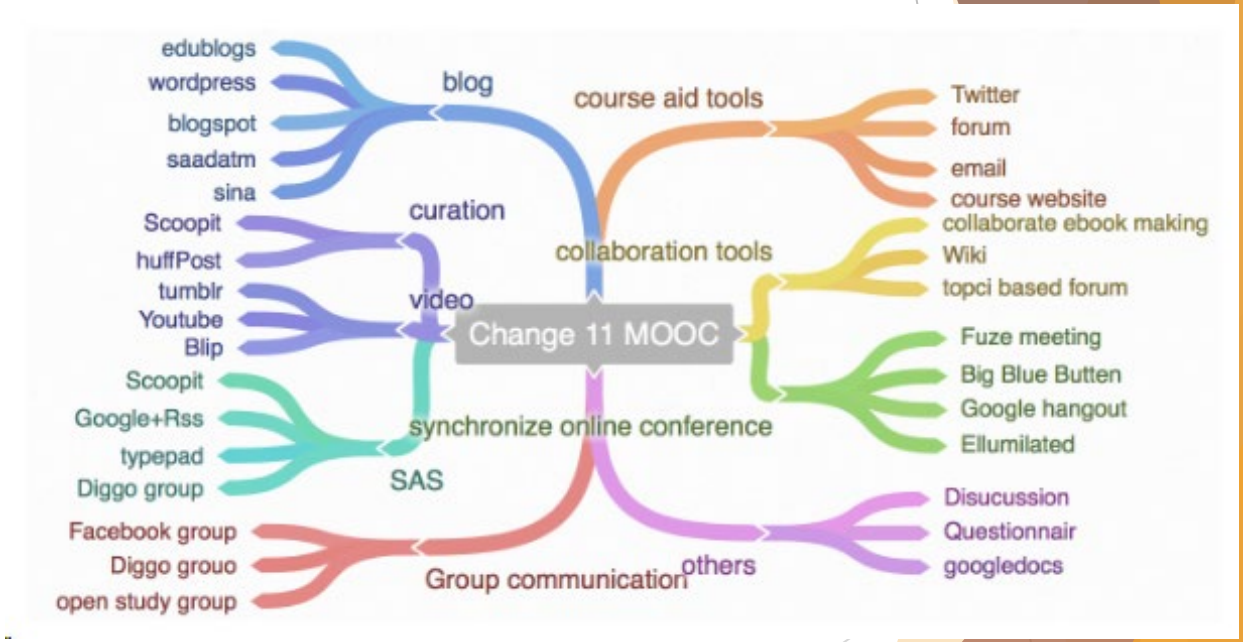
- Inability to Self-Direct
- Disconnection, demoralization



(AlDahdouh, 2018)

Connectivism as Pedagogy

- MOOCs
- Open Learning
- Active Learning
- Microlearning



(Wang, Anderson and Chen, 2018)

Connectivism as Pedagogy

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Table 1. Aims and pedagogical foundations of the activities in the course

Type of task	Type of activity	Aim	Pedagogical foundation (connectivism)
Forum discussion	Collaborative	Collaborative space to share and reflect	Building knowledge from diverse opinions
Online synchronous discussions	Collaborative	Direct communication with peers and tutors	Strengthen connections among participants
Creation of learning material using and reusing open educational resources	Individual	Tailored learning materials adapted to each learner needs	Building participants' capacity to learn
Sharing learning materials created and/or researched by the learners	Individual + Collaborative	Providing self-created and used learning resources	Connecting information sources
Questionnaires and activities of self-reflection	Individual	Self-reflection and awareness of their learning needs	Developing participants' ability to see connections between concepts and ideas

(Fondo and Konstantinidis, 2018)

Connectivism as Pedagogy

- Collaboration / Cooperation
- Personal Learning Networks
- Global Learning

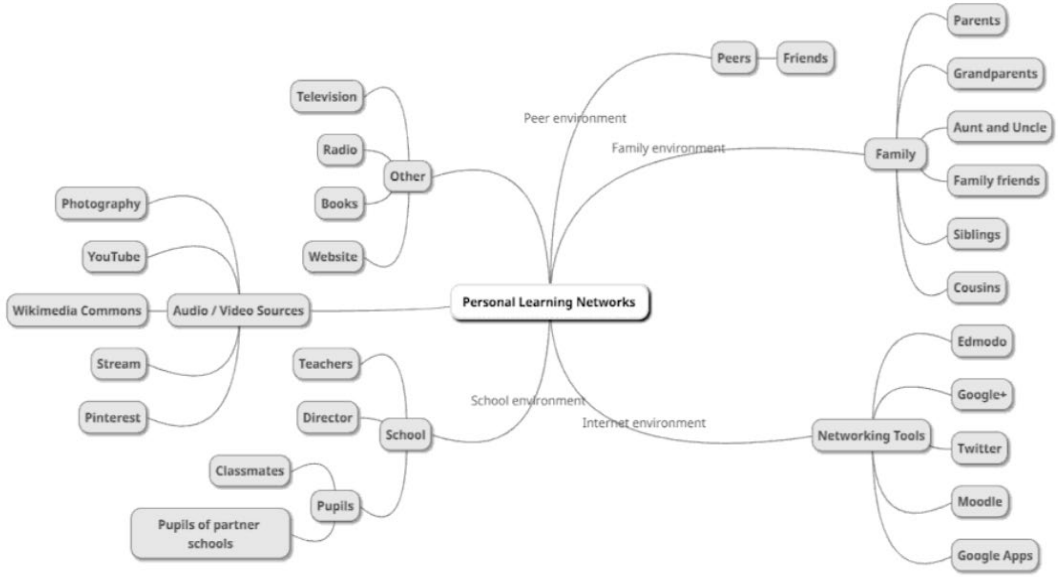

Figure 4: Personal learning networks

(Homanova, et.al., 2018)

Connectivism as a Theory of Learning

- Arguments that it's Not
- Does Not Explain Concept-Formation
- Does Not Explain Teaching
- Responses

Figure 1: Linear historical evolution of learning theories? (Altuna Urdín 2017)

Figure 2: Connectivism by Tracey (2009)

(Homanova, et al., 2018)

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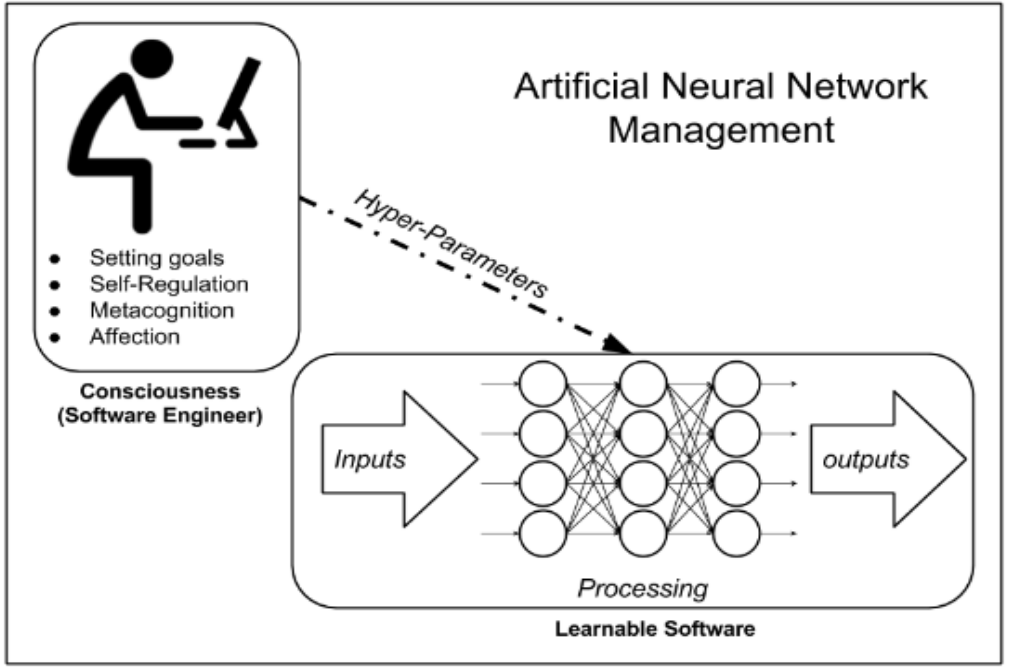

(Al Dahdouh, 2017)

Basis for Connectivism in Research

- Psychology
- Neuroscience
- Connectionism
- Education
- Chaos Theory
- Complex Adaptive Systems
- Sociology

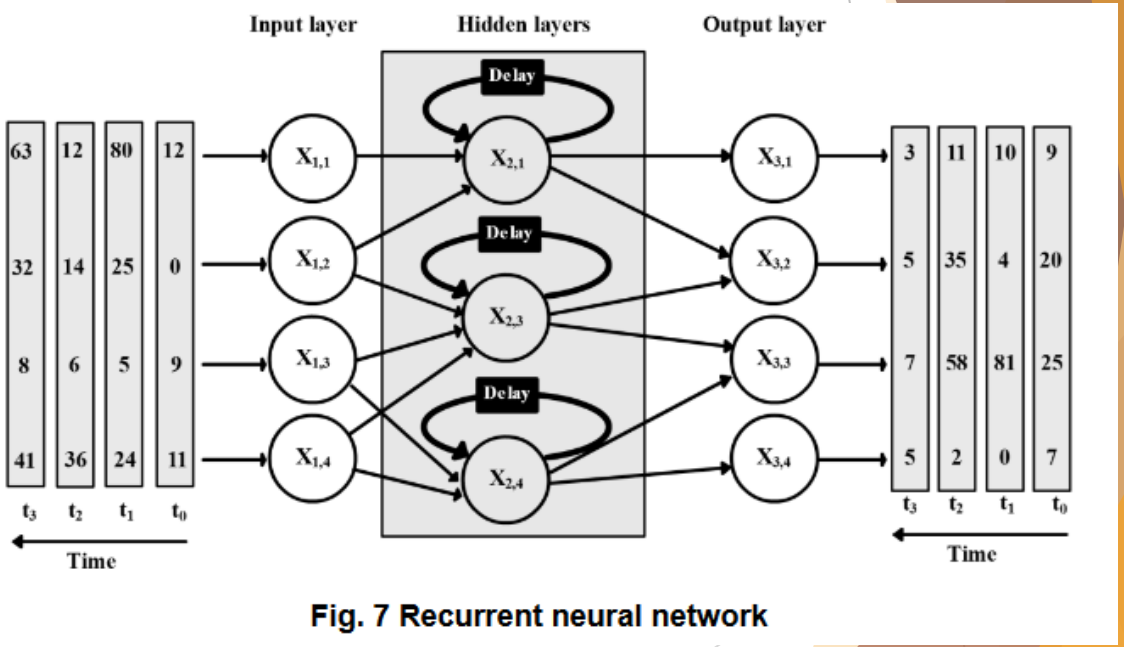

Fig. 7 Recurrent neural network

(AlDahdouh, 2018)

Evidence for Success

- Improved motivation
- Improved ability to learn
- Reduction of errors
- Performance improvements

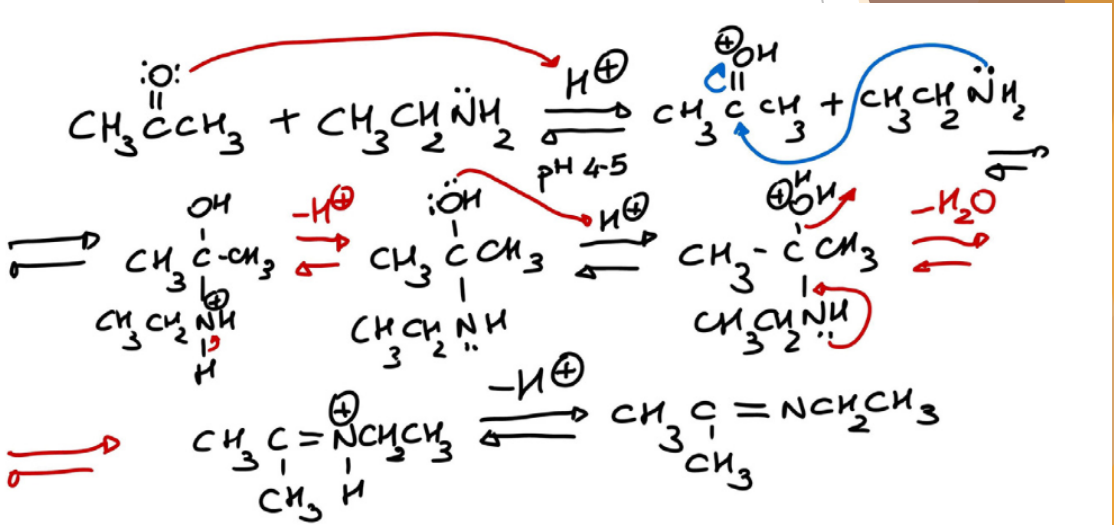

Fig. 3. Example of homework solution discussed in the class by the teacher: formation of an imine.

(Angelini and Gasbarri, 2018)

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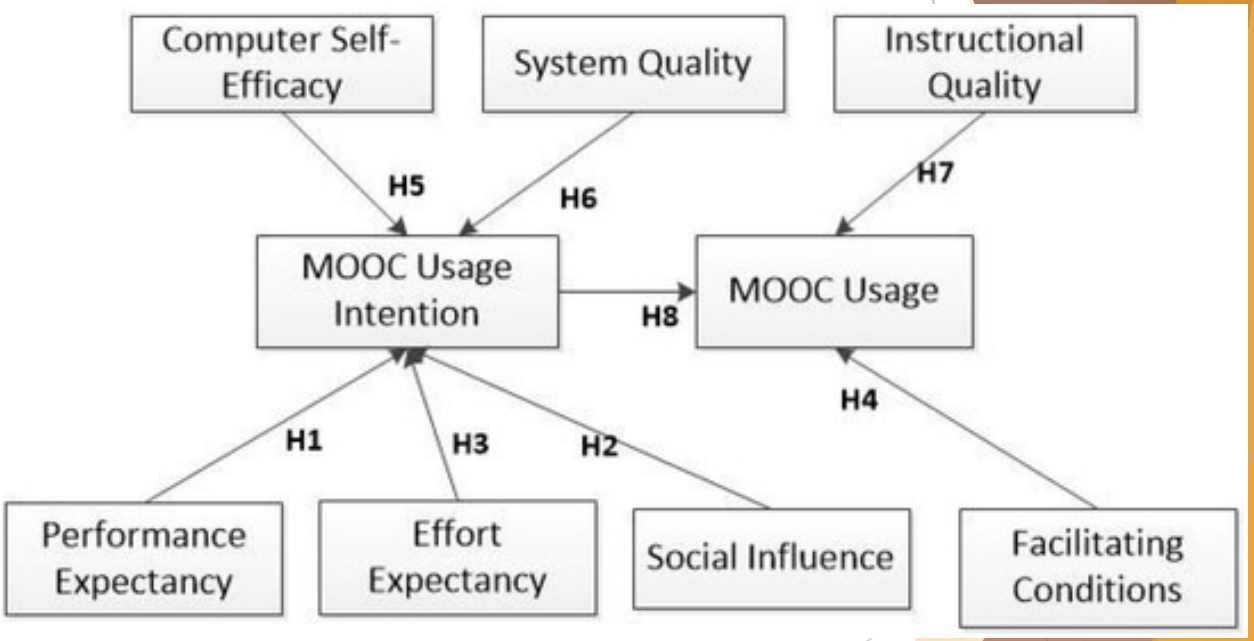

(Fianu, et.al., 2018)

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Table 2.

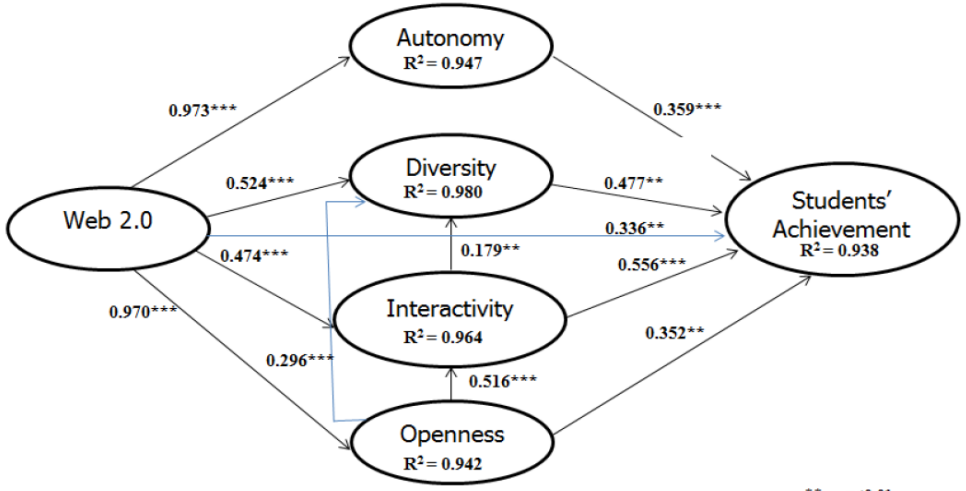


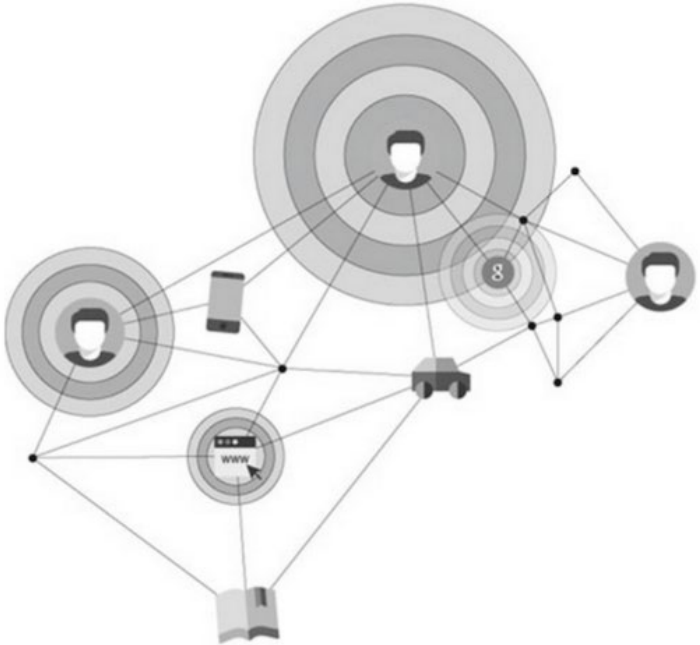
Figure 1: PLS-SEM Results Estimated for the Structural Model

(Zulkifley Mohamed and Nor Ubaidullah and Siti Yusof, 2018)

Moving Forward

- Critical Thinking and Deep Learning
- Rhizomatic Learning
- Social Networking
- Cognitive Cities

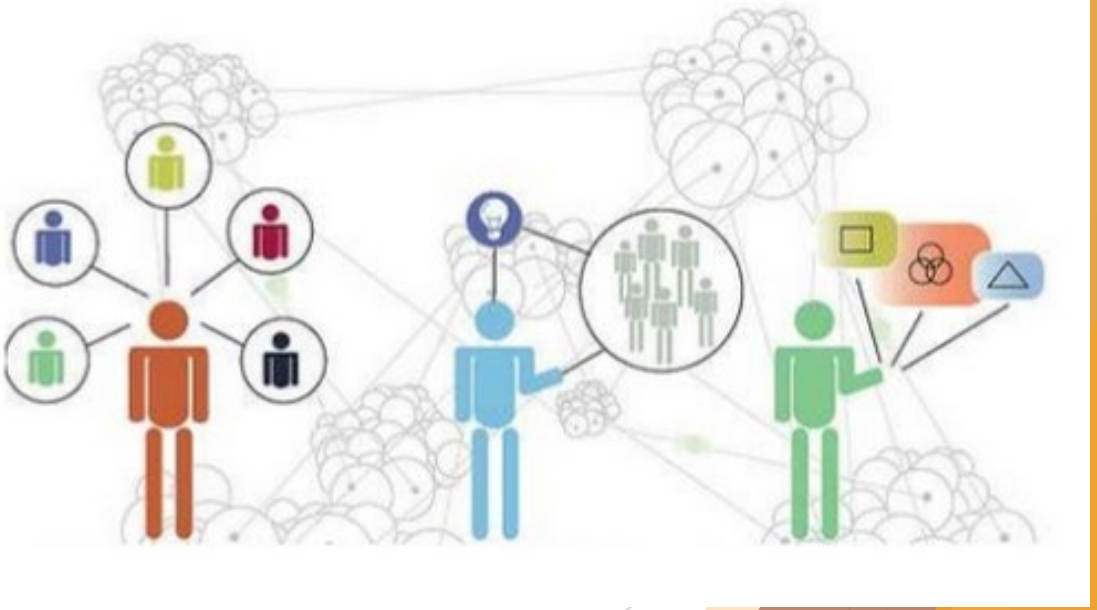
Fig. 1 Connectivism (following Siemens 2006)



(Tabacchi, et.al., 2018)

Thinking of Connectivism More Widely

- Building Relationships
- Distributed Cognition
- Co-Creation



Austen, Chen, Darlington, Daylamani-Zad, De'Cage and Farrant, 2014

https://www.downes.ca