

Constructivism and Connectivism

EDG14 Developing learning resources II
Graduate Certificate in Teaching
Tonga Institute of Education

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Objectives

- Become aware of own theories of learning.
- Describe the implications of learning theories to teaching
- Describe what Constructivism is:
 - Essence and focus
- Describe what Connectivism is.
 - Essence and focus

Your own theory of learning

Just a theory

Theory

- A (mere) reaction to experience?
- A **well-substantiated** explanation for a phenomenon.

Why theories?

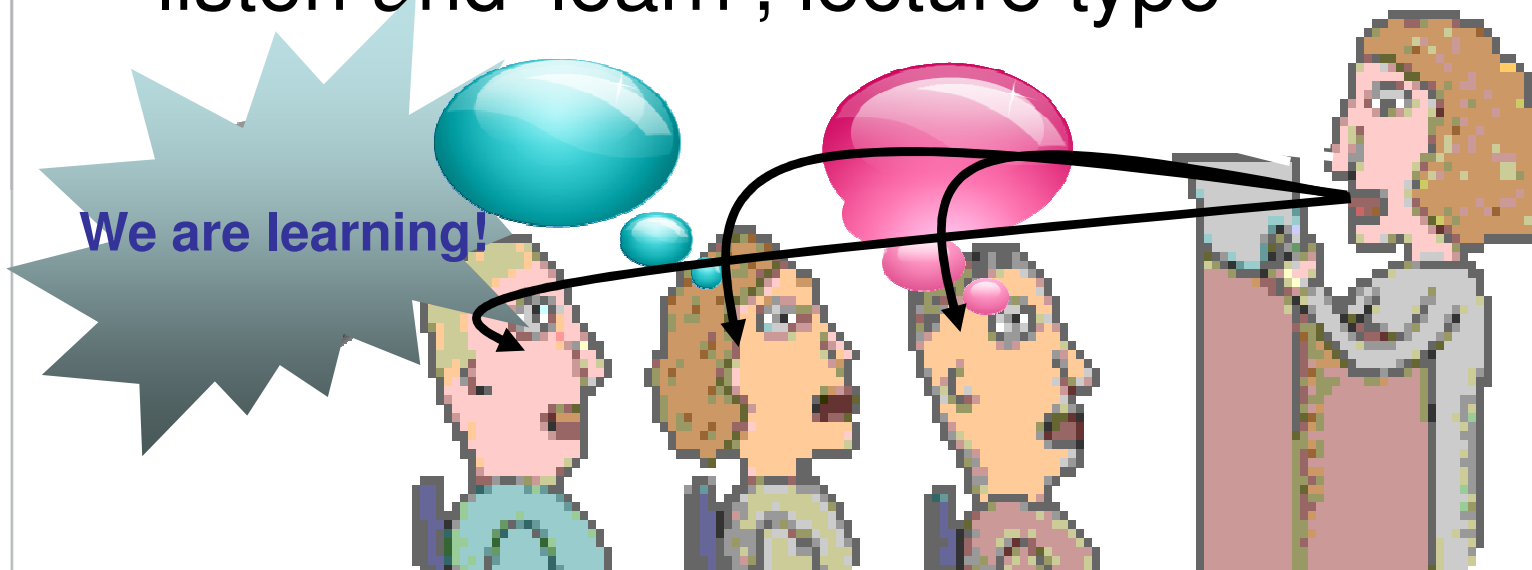
1. They help us:
 - explain
 - predict
 - live with a sense of security /certainty;
2. Provide motivation for action.
3. Can't effectively change action without changing our theories (beliefs)

Objectivism

- That knowledge resides in the book/teacher's brain. Therefore, it must be reproduced & memorised; passed on unchanged
- Emphasis on objectivity
 - Beliefs are not influenced by personal feelings or opinions; they are based on "facts". Facts = what can be observed (available to senses)
- Teaching = talking/speaking/lecturing
- Learning = memorisation? listening?

Traditional theories about teaching & learning

- Teaching strategy - Teacher talks, students listen and 'learn'; lecture type



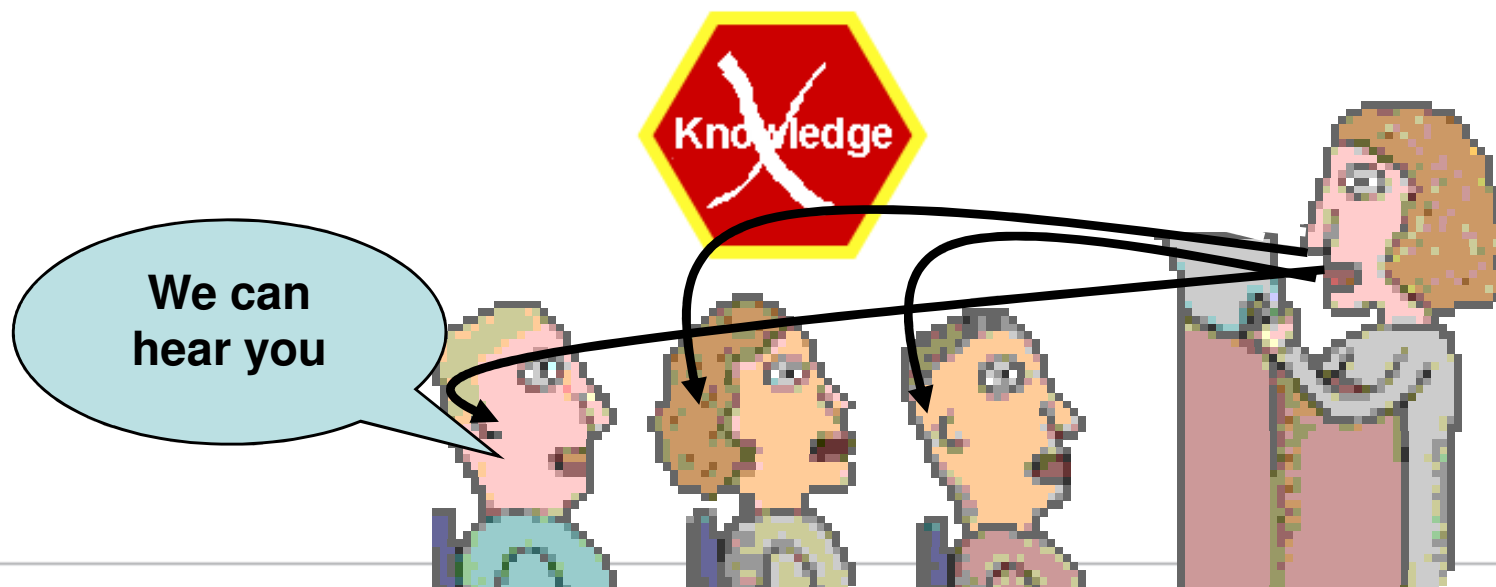
- Teachers ask: "Is the answer right?"

Constructivism

1. During learning, the **ONLY** tools available to a student are his/her senses (e.g. sight, hearing, feel, taste, smell)
2. Learning is the result of an individual using his/her **prior experiences** to interpret new experiences.
 - We see the world through the lenses of our prior experiences (prior learning, culture, up-bringing, etc)
 - This interpretation involves the *construction* and *deconstruction*
3. Knowledge resides in the mind of the learner

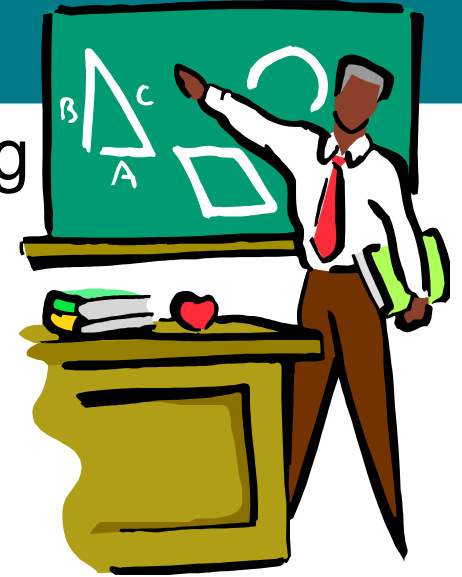
Constructivism

- Just because learners are listening doesn't mean they are learning!
- In constructivism: the learner is an active constructor of knowledge; the teacher is a facilitator of learners' construction of knowledge



Constructivism

- The learner interprets new experiences using what he/she already knows about those experiences (prior experience/knowledge)



- Students construct knowledge in ways that make the best sense to them:
- The teacher asks: “Is the answer meaningful?”

Constructivism

- If answer is meaningful and workable = right
- **Embraces diversity** of ideas –promotes free-diverse thinking
- Prior experience is important: can either enhance learning or prevents meaningful understanding. Expose student to diversity of experiences:
 - Family members, TV, newspapers, toys, books, videos, etc

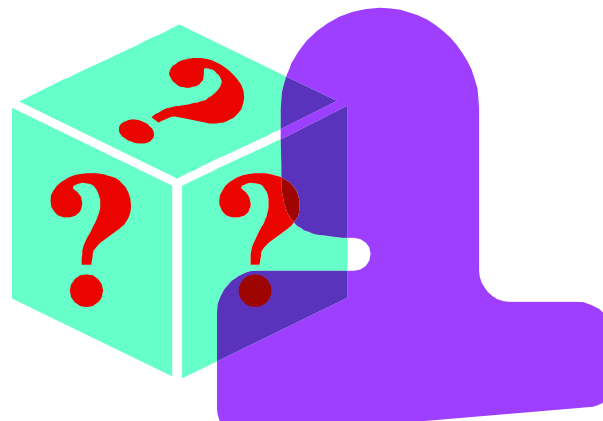
Objectivism vs Constructivism

- Target of learning is:

- Knowledge to be transferred to the mind of the learner (Objectivism)
- Knowledge to be created in the mind of the learner (Constructivism).



Acquisition of Knowledge



We need new learning theories!

- Advancement in technology (tech. revolution) makes existing learning theories very limited.
- Change is fast:
 - Old (traditional) theories – **behaviorism** and **constructivism** were conceived to explain learning which was not heavily impacted by technology;
 - Information development was slow. ‘Knowledge life’ (from when knowledge is obtained to when it is obsolete) was measured in decades (Gonzalez, 2004).
 - Last 10-20yrs: technology is impacting our lives significantly (ATM-cards, e-mail, e-banking, e-learning, e-survey, driving license, Passports, EFTPOS, FB, Twitter, etc)
 - Knowledge life is decreasing very quickly. Good ideas become obsolete very quickly (e.g. Where is Bebo now?, CDs, USB-flash; mobile phones).
- World is more complex now.
 - Envision Tonga in 15-20 yrs time!

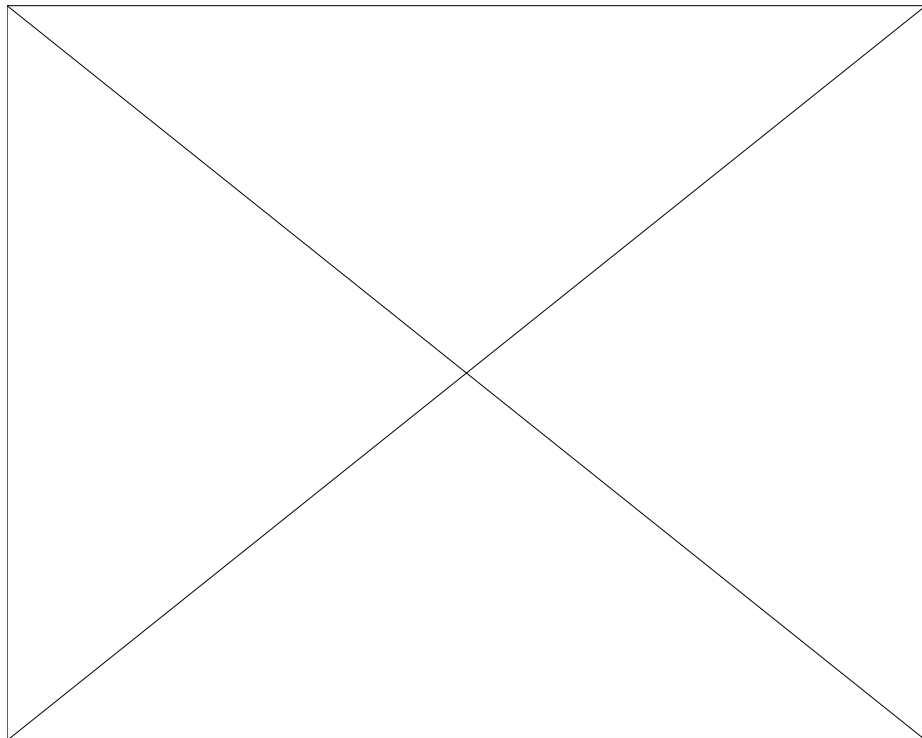
Tonga of 2020

- More complex
- Advances in technology:
 - Especially the ubiquity of the mass media and the Internet
 - Traditional ideas & knowledge become outdated/obsolete quickly
 - Due to shortening knowledge half-life
 - Information overload
- Are we preparing students for their future?

The theory of Connectivism

- A theory for a world that is complex
- What's important in a fast-changing world:
 - the ability to seek information out in a system when it is needed, to ascertain whether or not it is still acceptable, and to recognize the connections present

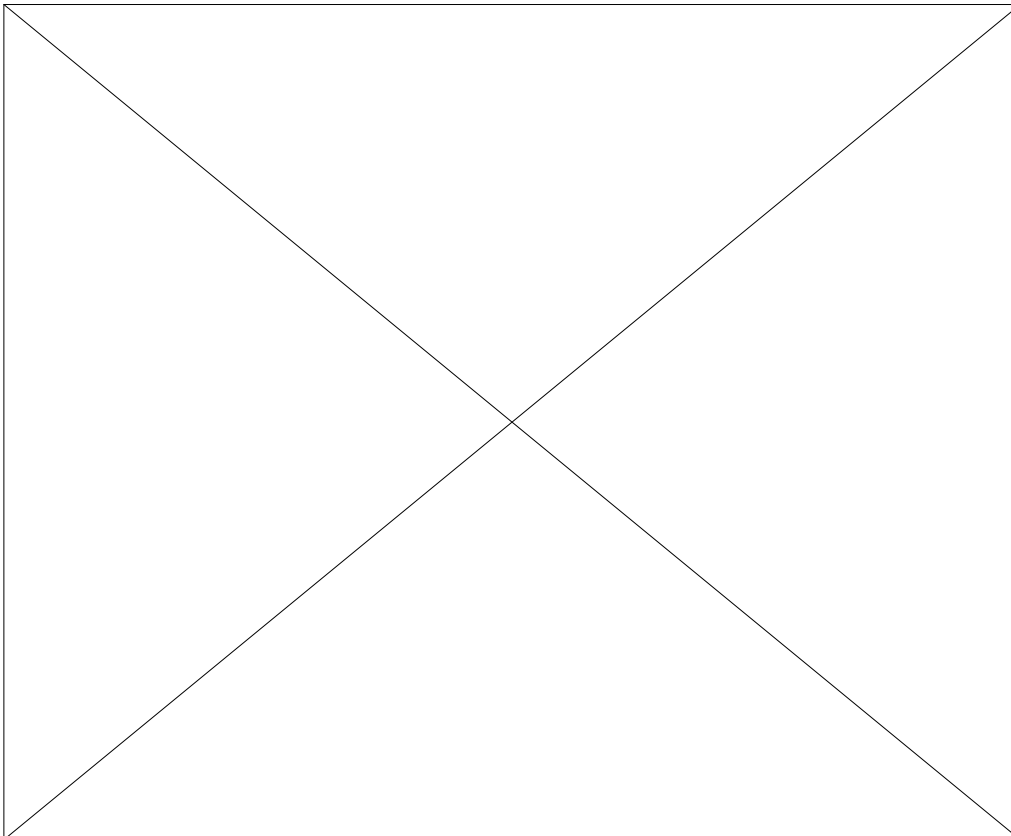
Connectivism is



- View or theory of learning
- Knowledge resides in non-human objects (e.g. computers, web, internet, networks, etc)
- Emphasis on the connection than on content

YouTube video: Teemu Arina on *What is Connectivism*

What is learning (in connectivism)?

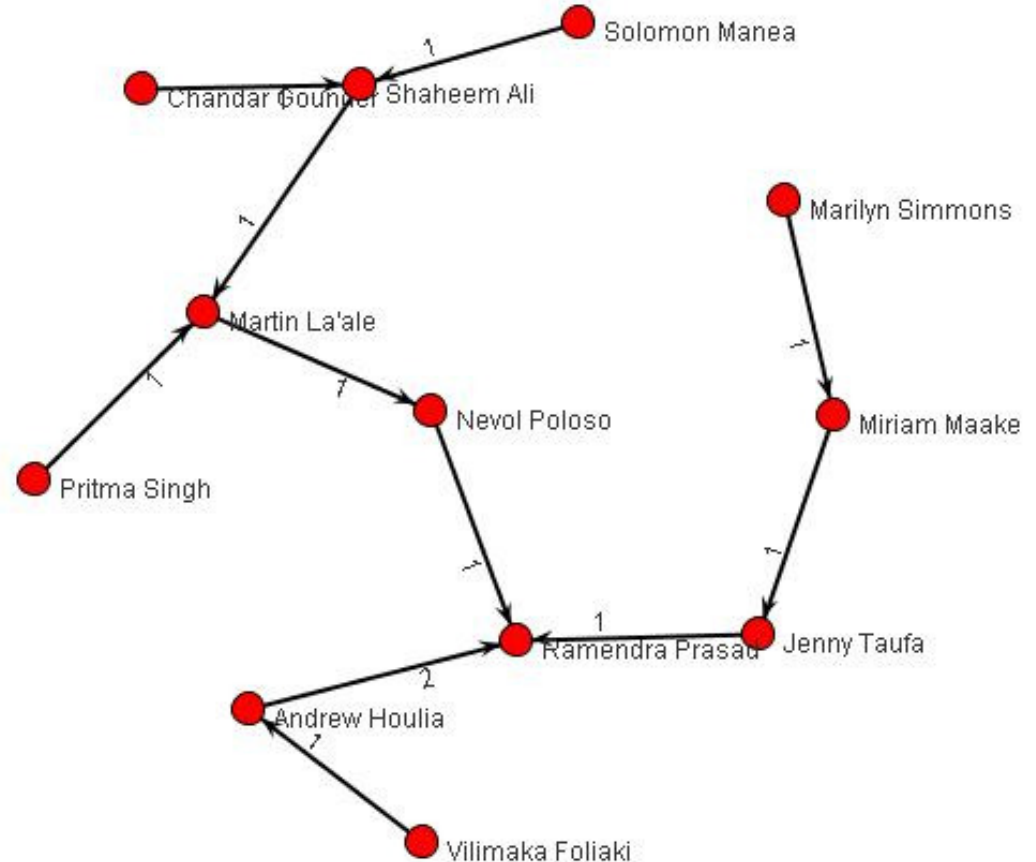


You Tube video: George Siemens on *What is learning?*

- Knowledge is networked (exists in networks).
- Learning is the ability to:
 - seek out information within a network when needed,
 - ascertain whether or not information is still current and acceptable
 - connect to others
 - recognize the connections present within a network

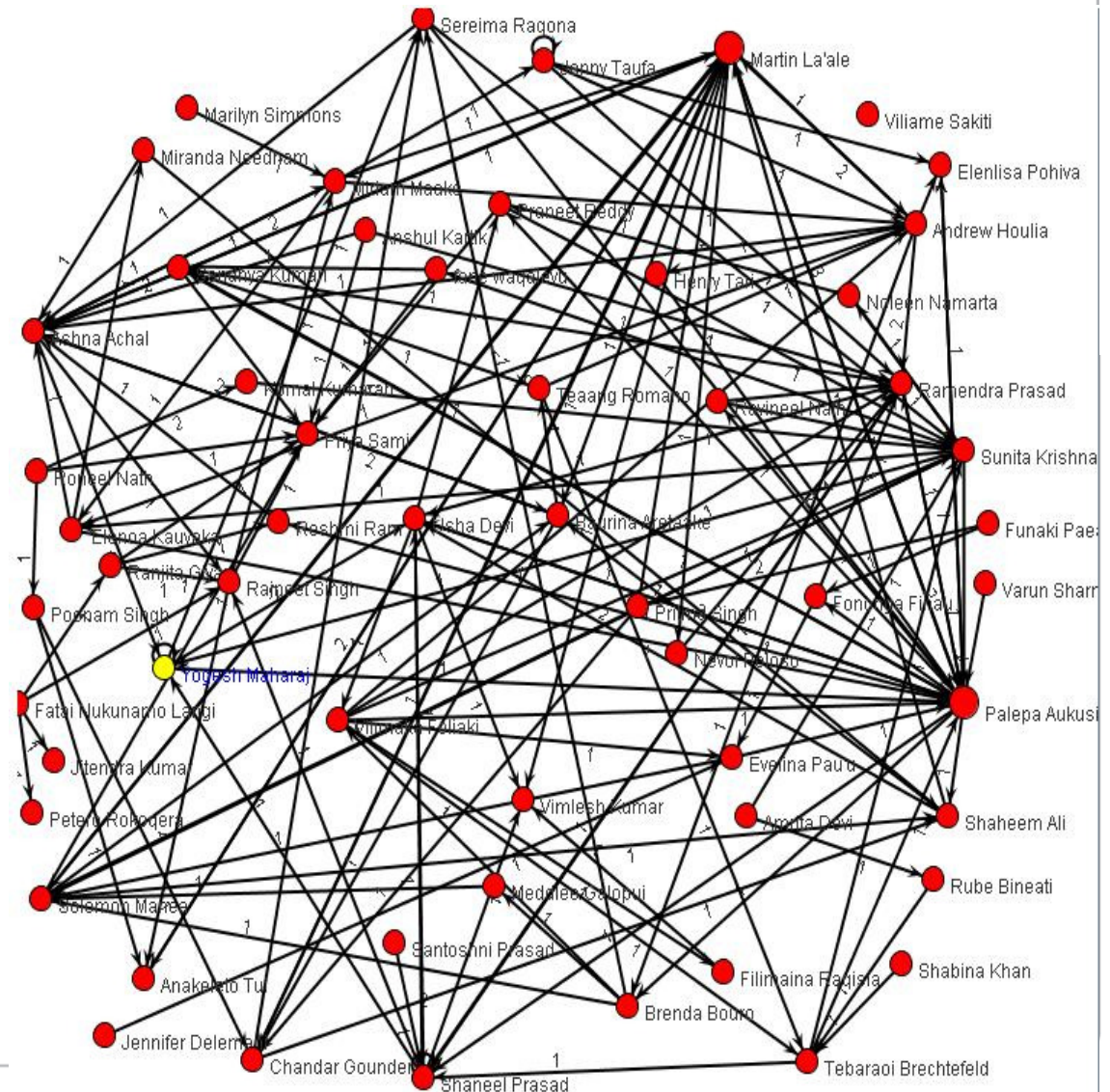
Connectivist learning starts

- When learner makes a connection, starts feeding information into a learning community (Kop and Hill, 2008)



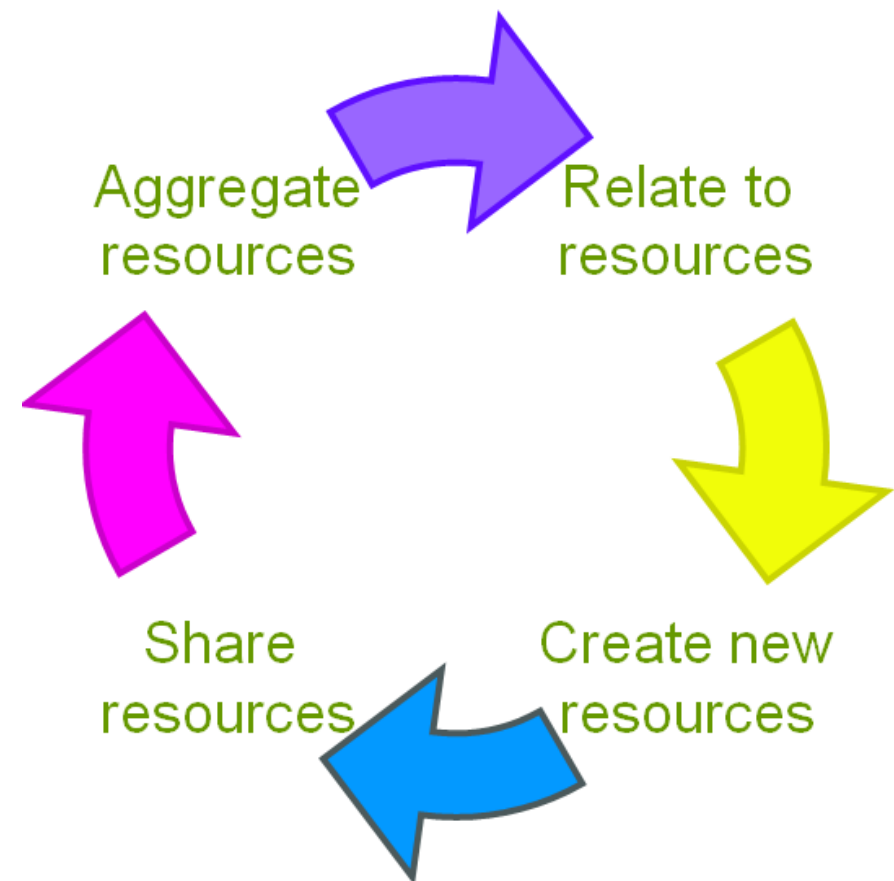
In connectivism, knowledge is:

- Distributed (not located in any particular place)
- Consisted of network of connections
 - Cannot be transferred (Downes, 2006)



In networks

- People are **actively engaged with resources** in **communication** with others in the network
- Learning is enhanced by these 4 processes (Kop, 2010):
- Learning makes networks complex but the synergy of network makes learning manageable.



Constructivism

Connectivism

Focus

Learner's preparation for a wide variety of situations

Meaningful interpretations

Learner seeking for information and knowledge that already exist;

Best tools to use

Where knowledge resides

In the mind of the learner

In networks

Learning means

To construct .

To interpret new information using what learner already knows.

To connect to others in a network

To seek for knowledge when it is needed;

To ascertain whether or not knowledge is still current and acceptable,

References

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