

A Learning ~~Theory~~ Framework for the Digital Age

for

- enlightened Parents
- enthusiastic Teachers
- autonomous Learners

Web-based Learning

The Second Strand of Education

The world has changed and become more networked... What is needed is not a new theory for the digital age, but a model that integrates the different theories to guide the design of online learning materials.

- Dr. Mohamed Ally at Athabasca University

Summary

☑ *What is the Second Strand of Education?*

☑ *Elements of the Second Strand*

- *Learner Facilitator:*

Understand the learner, Curate & Filter content, Bring Coherence, Co-explore & Co-create

- *Web as a Classroom*

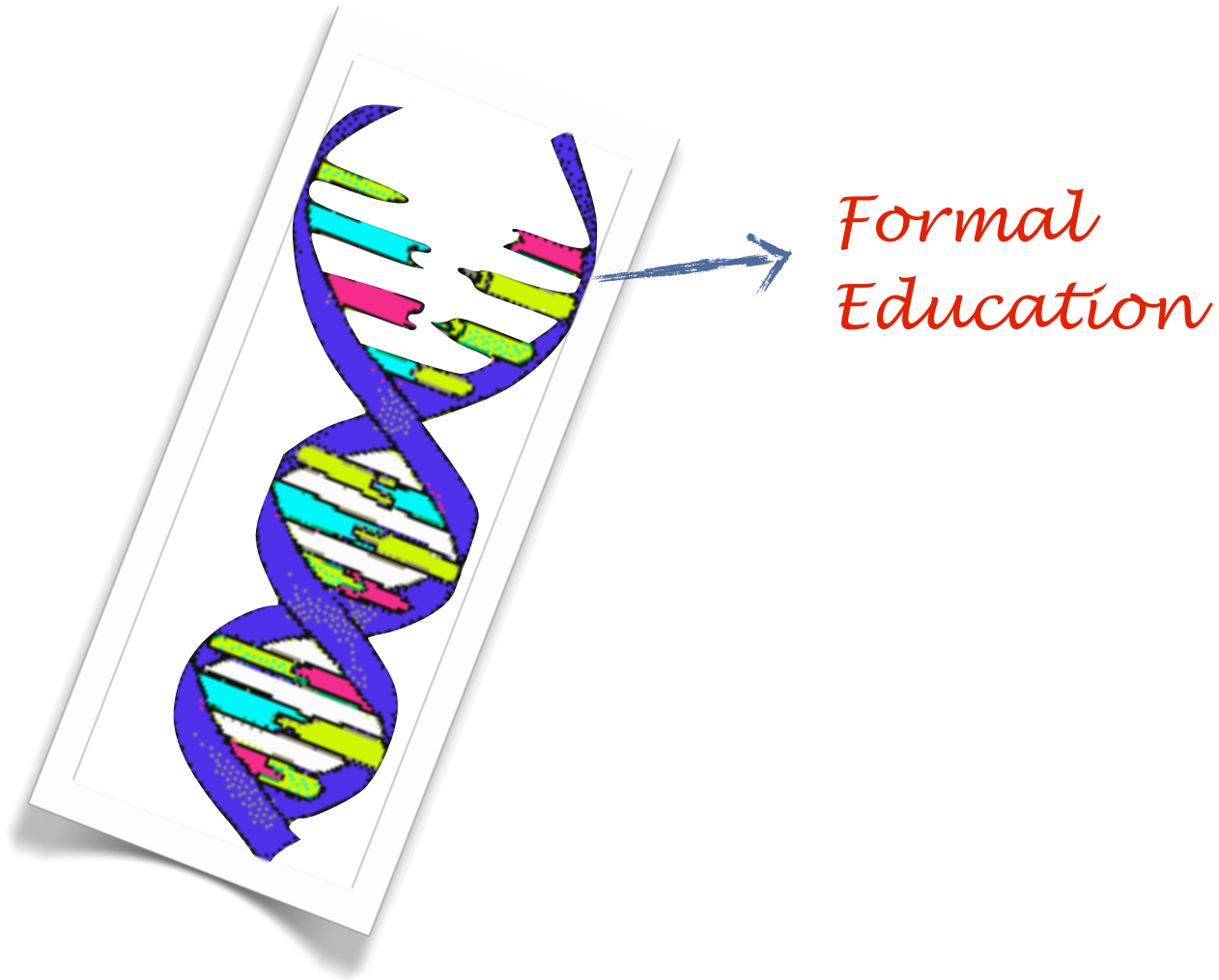
- *Role of the Learner*

What learning theories apply

☑ *Cautions*

What is the
Second Strand of Education?

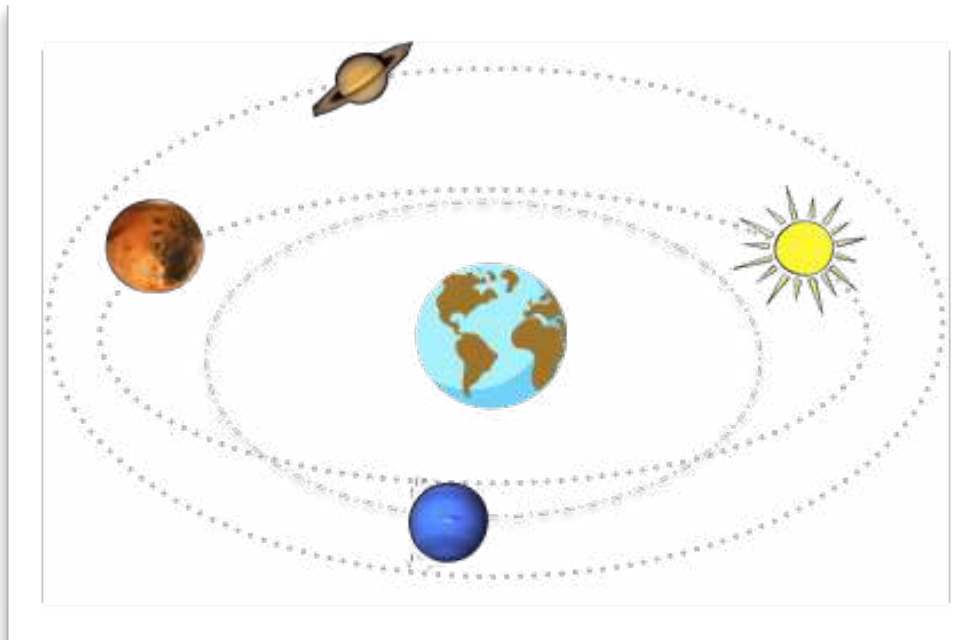
The first strand is formal education



*Formal
Education*

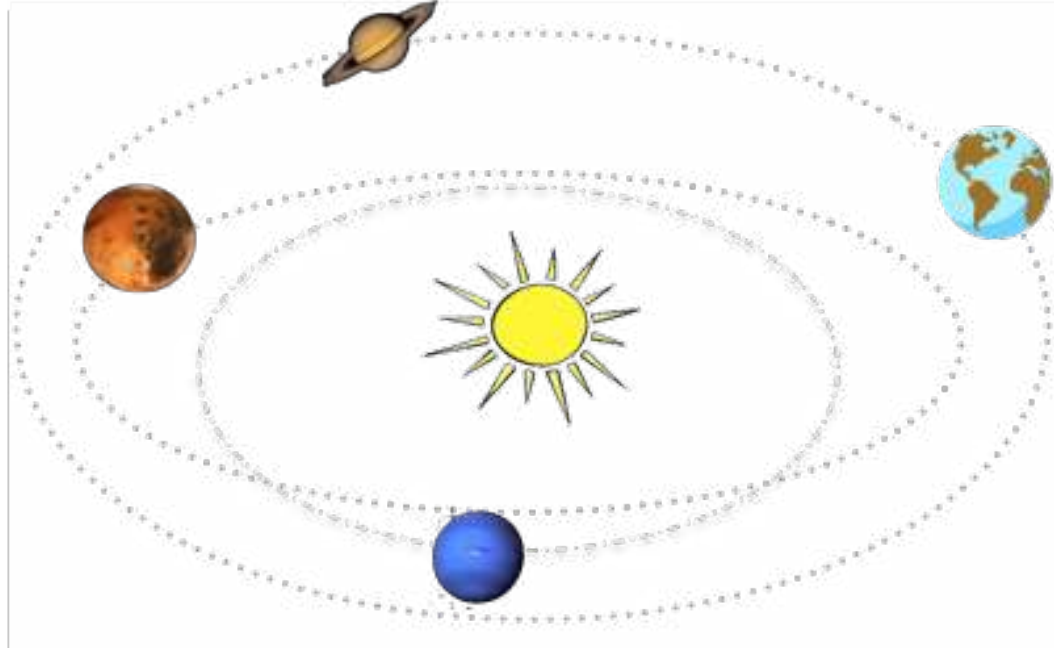
To understand the Second Strand, an analogy

Our understanding of solar system has changed...



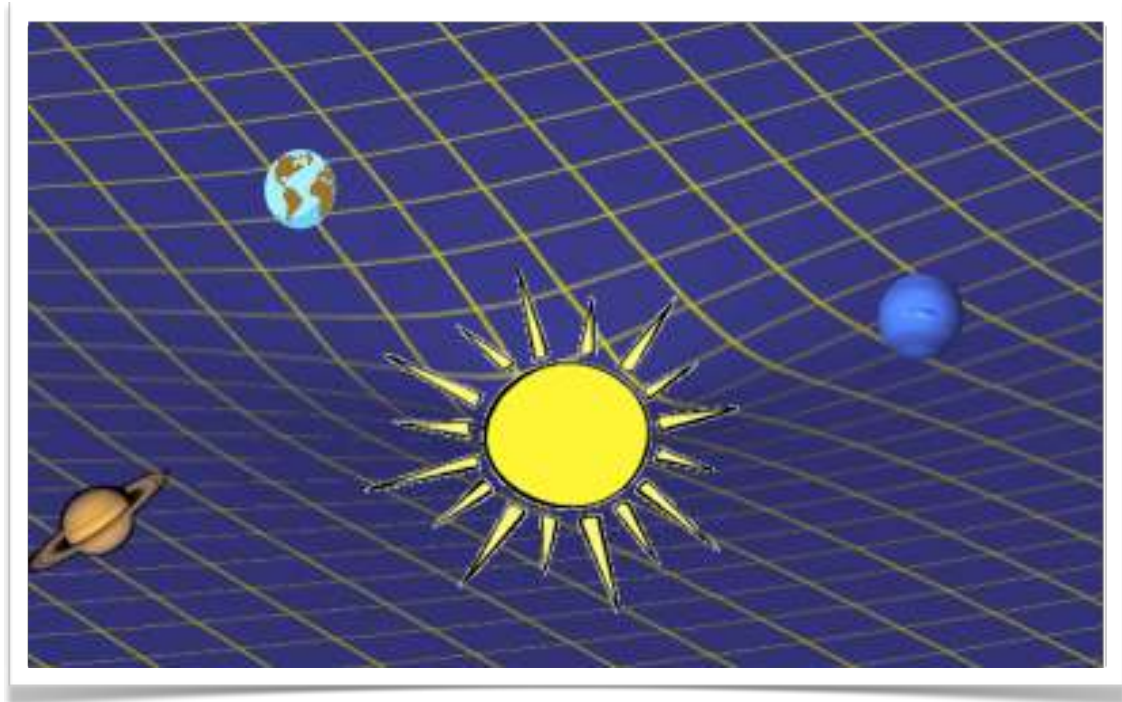
From Earth-centric...





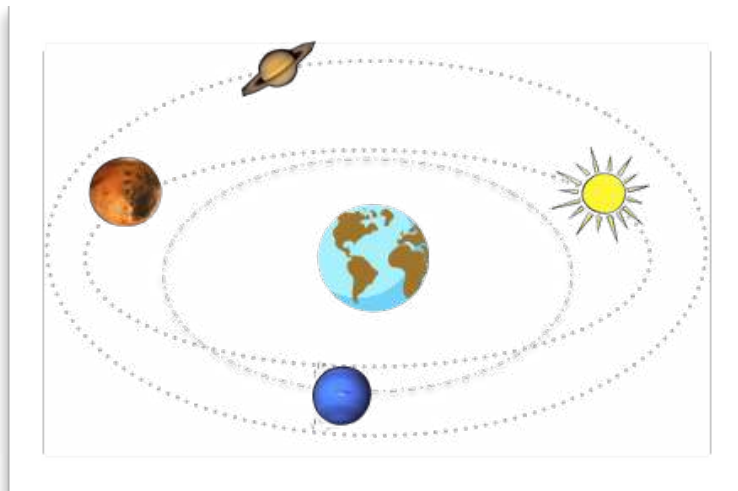
to Sun-centric...





to Mass-centric

Likewise our view on education is changing...

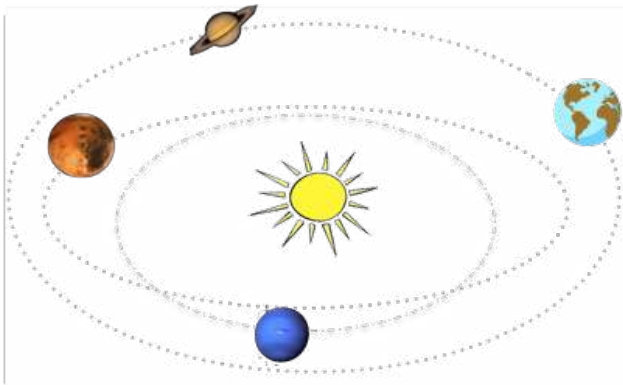


From Earth-centric...

=

Teacher-
centric...



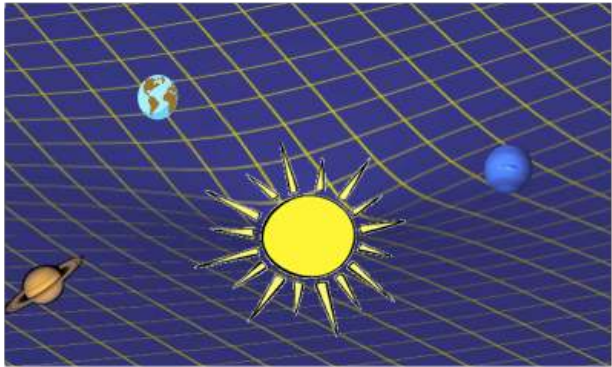


to Sun-centric...

=

Learner-
centric...





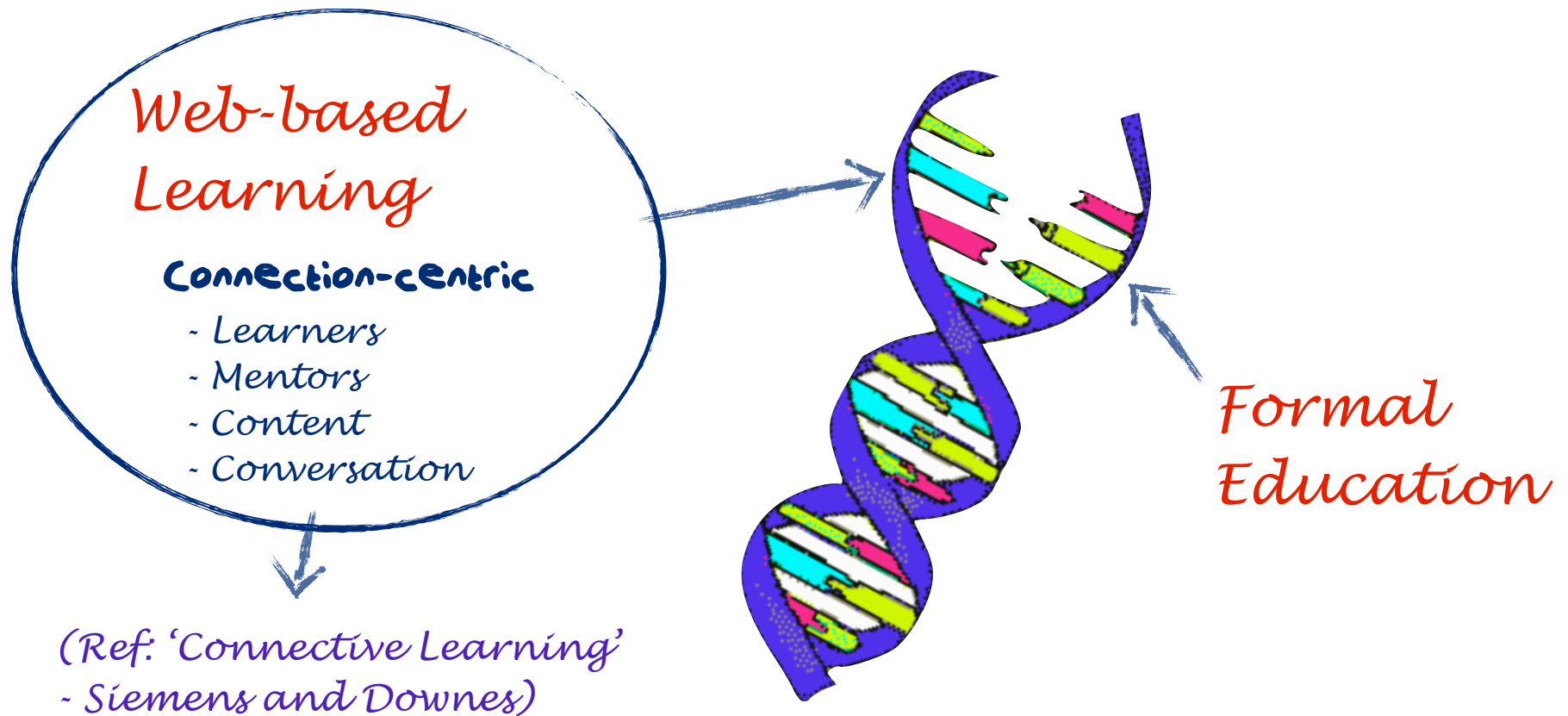
to Mass-centric

= Connection
-centric



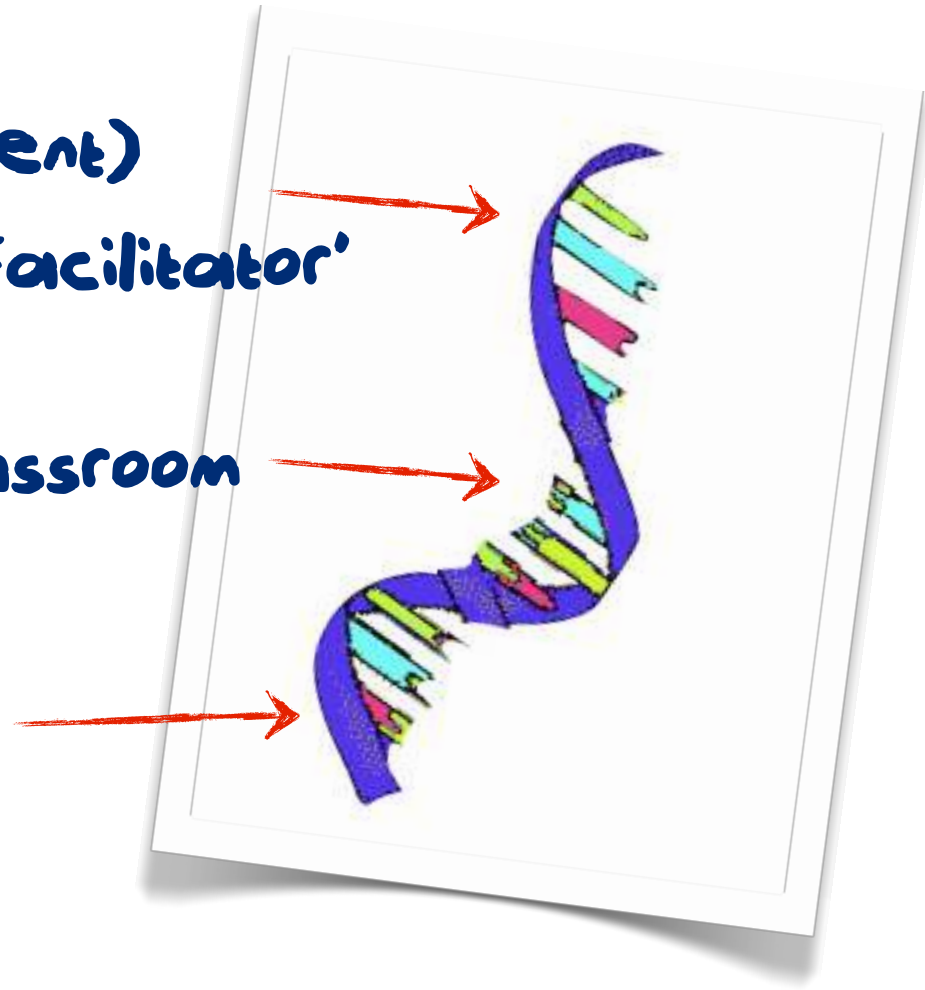
- Learners
- Mentors
- Content
- Conversation

This 'Web-based Learning' is the Second Strand of Education



Elements of the Second Strand

1. The Teacher (or Parent) becomes a 'Learner Facilitator'
2. Web becomes the Classroom
3. Autonomous Learner



1. Role of Learner Facilitator in the Second Strand of Education

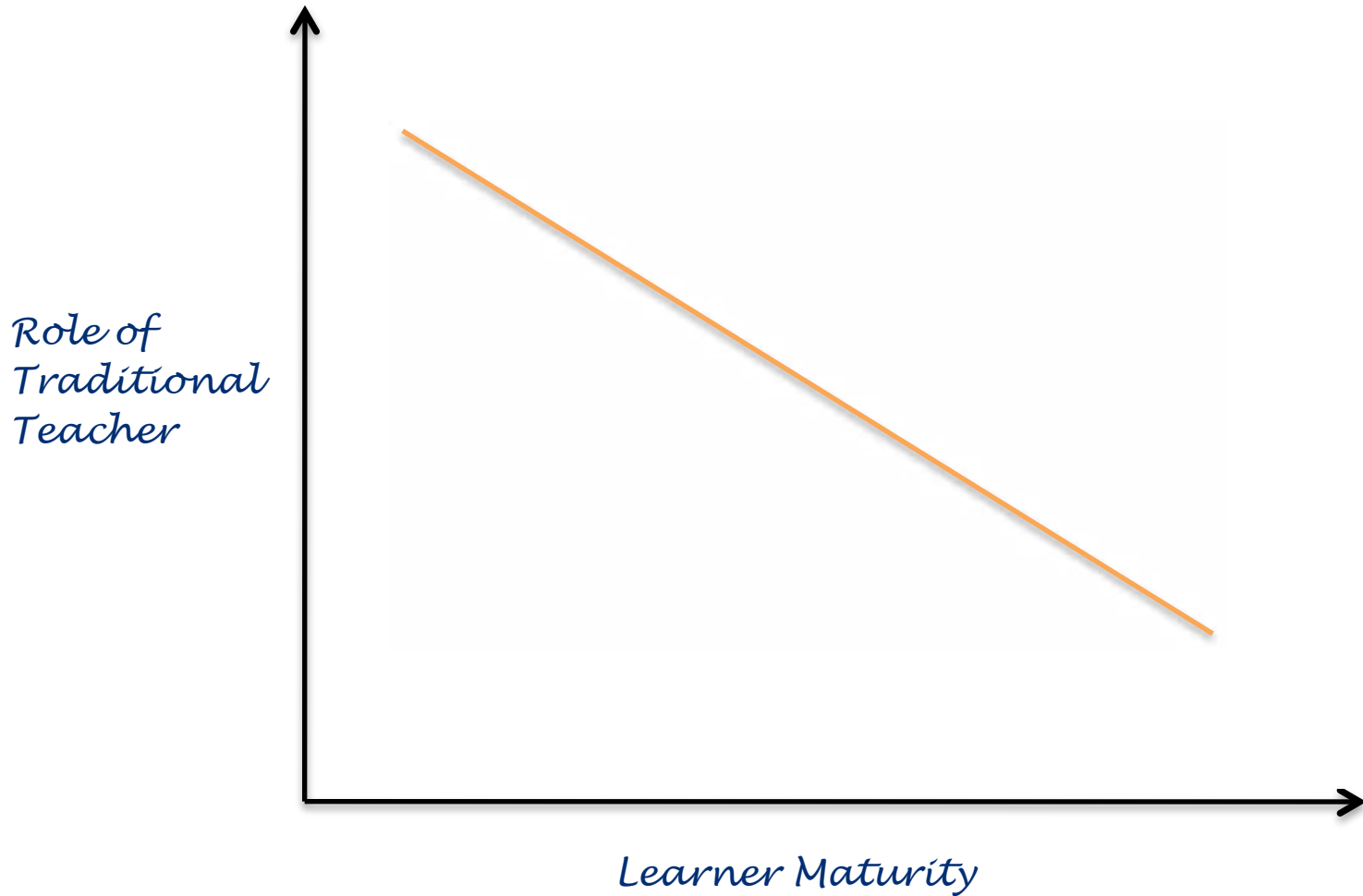
Web-based Learning 1.0

One-on-one relationship between learner and web-based learning content.

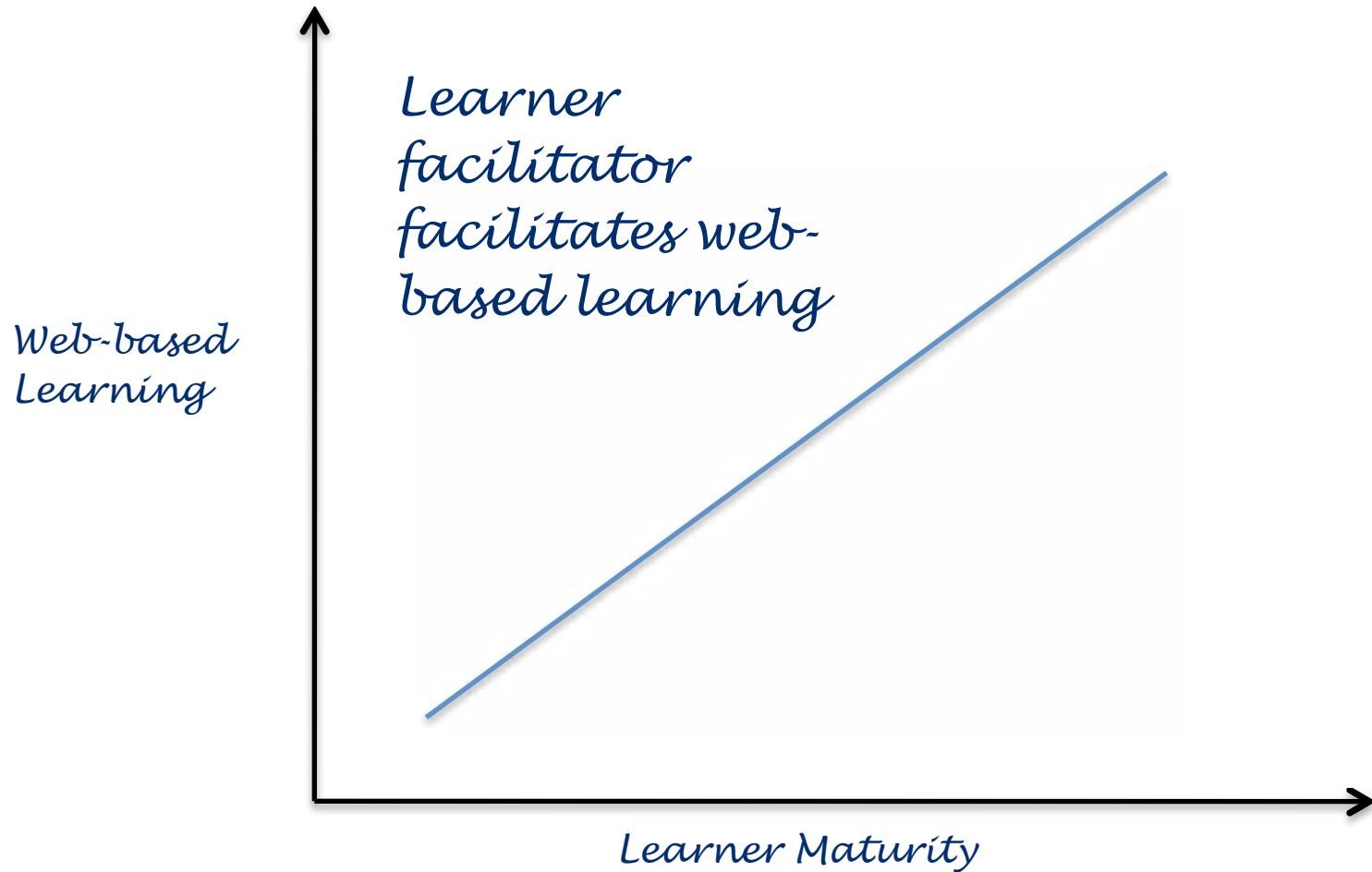


Learner Facilitator, understanding the unique needs of the learner, helps the learner navigate the web, curating and filtering content, co-exploring and leading to deeper comprehension.

Role of Learner Facilitator



Role of Learner Facilitator



Role of Learner Facilitator



1. Role of the Learner Facilitator

- a) *Understand the specific needs of the learner*
- b) *Curate and Filter appropriate content*
- c) *Bring coherence*
- d) *Co-explore and co-create*

a) Learner Facilitator should "Understand the Learner" ...

- ☑ Understand specific learner needs
- ☑ Understand type of intelligence
- ☑ Understand learner's preferred style of learning
- ☑ Understand learner motivation
 - From 'extrinsic' to 'intrinsic' motivation (fire-up a yearning to learn)

...Learning Theories useful for Learner Facilitator to "Understand the Learners"

- ☑ Howard Gardner's Multiple Intelligences Theory
- ☑ Piaget's Stage Development Theory
- ☑ ARCS Theory of Motivation
- ☑ Motivation 3.0 - Autonomy, Mastery, Purpose

b) Learner Facilitator as 'Curator' and 'Filter' of learning content...

- ☑ *Guide the learner navigate the huge content available on the web by*
 - *Curating content*
 - *Filtering appropriate content*

...Learning Theories useful for Learner Facilitator "Curate and Filter" content

- ☑ *Cognitive Learning Theory* - build learning muscle; acquire, assimilate, retain and retrieve knowledge
 - *Curate appropriate free content . E.g. MIT World, MIT OCW, Google Scholar, iTunes University, OpenYale, Khan Academy*

...Learning Theories useful for Learner Facilitator "Curate and Filter" content

- ☑ *Social Learning Theory* - 'more knowledgeable other' (MKO)
 - *Filter content using - Wisdom of the Crowd (e.g. Amazon - people who read this also read), Rating of content, Social Bookmarking (Digg, Reddit)*

c) Learner Facilitator should help "Gain Coherence" ...

- Knowledge on the web is highly fragmented, learner facilitator should help the learner make sense and gain coherence
- Facilitate the Learner gain deeper understanding - from knowledge to application

...Learning Theories useful for Learner

Facilitator create "Coherence"

- ☑ *Cognitive Learning Theory* -
information processing, change in
mental schemata, transfer from short-
term to long-term
 - Add Context to information
 - Online Mindmaps
 - Graphic Organisers

...Learning Theories useful for Learner

Facilitator create "Coherence"

- ☑ *Constructivist Learning Theory* - inquiry based learning, discovery learning, active participation
 - Webquests
 - Blog, Twitter - learner shares what is being learnt in own words, which leads to deeper comprehension

d) Learner Facilitator as a "Co-Explorer and Co-Creator"

- ☒ *Sage-on-stage > Guide-by-the-side > Co-explorer*
- ☒ *Learner Facilitator actively participates and 'co-creates' with the learners*

...Learning Theories useful for Learner Facilitator as "Co-Explorer and Co-Creator"

- ☑ *Social Learning Theory* - Guided Learning, Scaffolding, Fading, Zone of Proximal Development, Self-Efficacy
 - Co-explore learning content as a guide , providing scaffolding and enhancing the Self-Efficacy of the learner
 - Blog, Twitter - learner shares what is being learnt in own words, which leads to deeper comprehension

...Learning Theories useful for Learner Facilitator as "Co-Explorer and Co-Creator"

- ☑ *Constructivist Learning Theory* - inquiry based learning, discovery learning, active participation
 - Young Learners - guided participation in learning communities like 'Scratch' (MIT)
 - Inquiries that require game-based learning (e.g. serious gaming, simulations (e.g. Gizmo Learning))

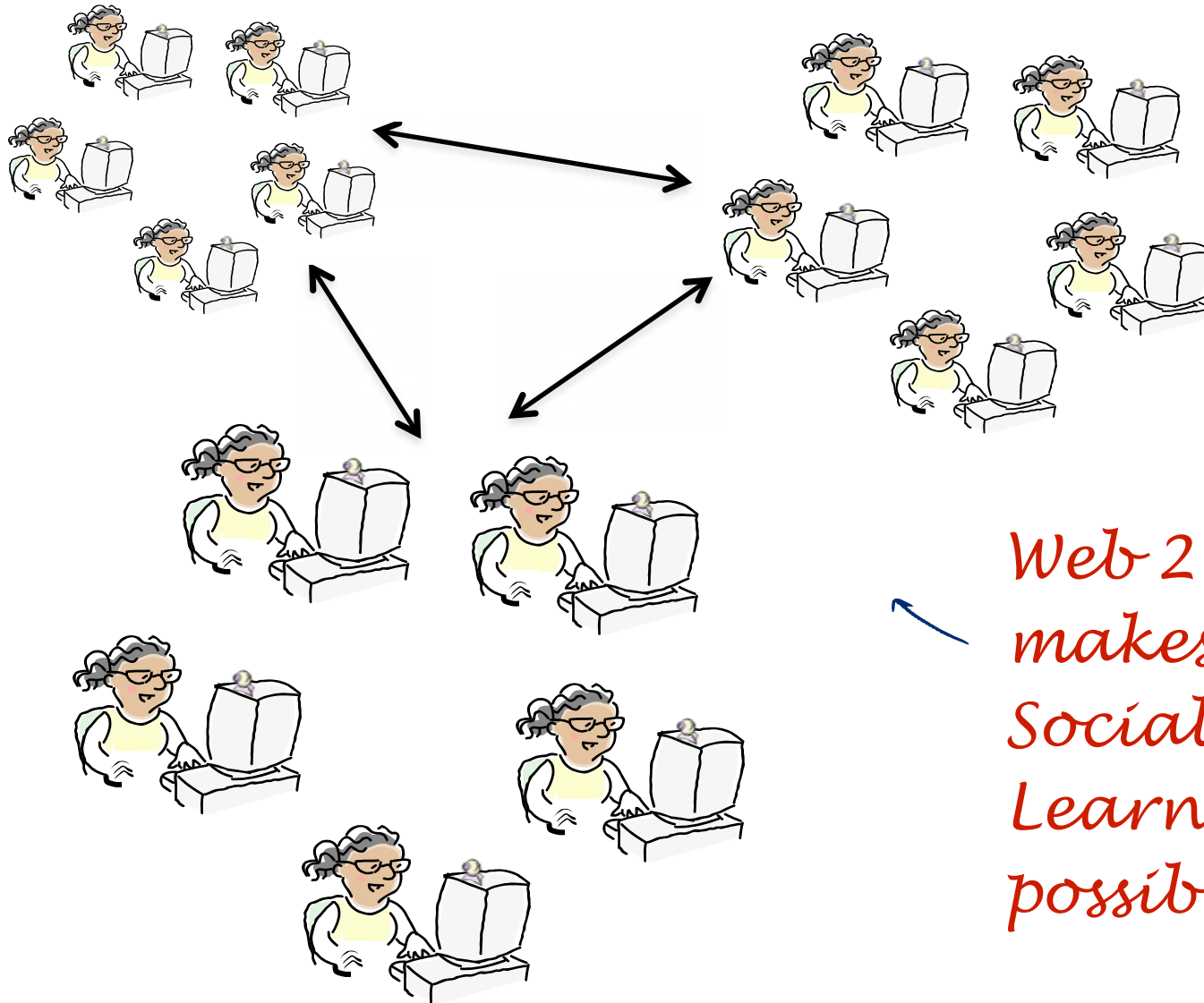
...Learning Theories useful for Learner Facilitator as "Co-Explorer and Co-Creator"

- ☑ *Humanism Learning Theory - learning from within*
 - *Write blogs, tweets*
 - *Self-publish books - e.g. Lulu, Create Space, iBookStore*

2. Web as a Classroom

in the Second Strand of Education

Web-based Learning 2.0



*Web 2.0
makes online
Social
Learning
possible*

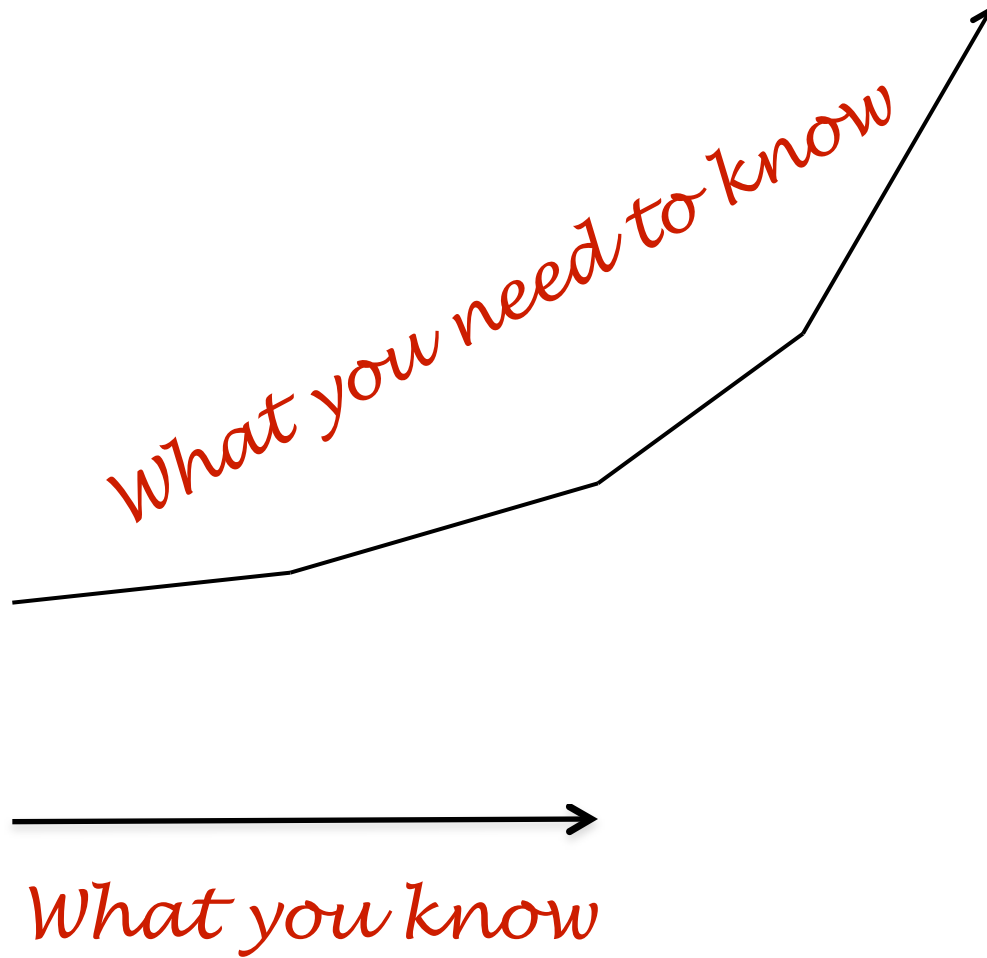
Importance of Online Social Learning

21st Century

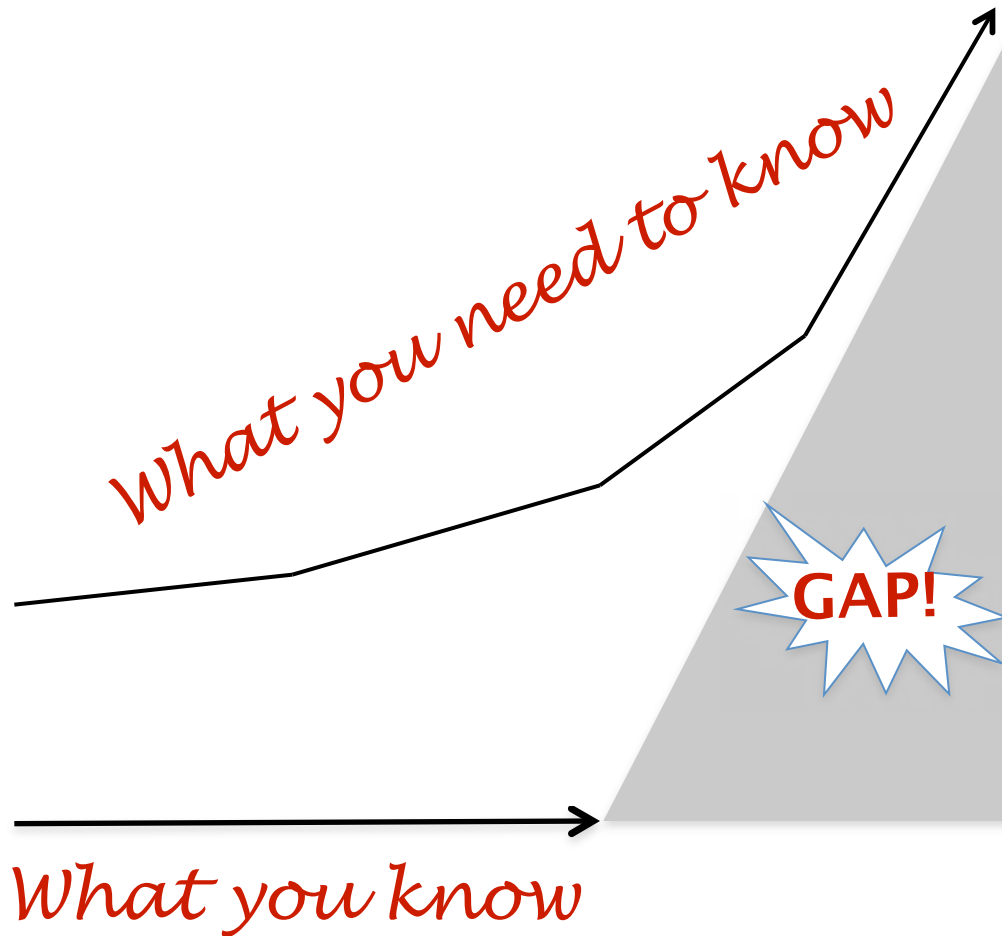


What you know

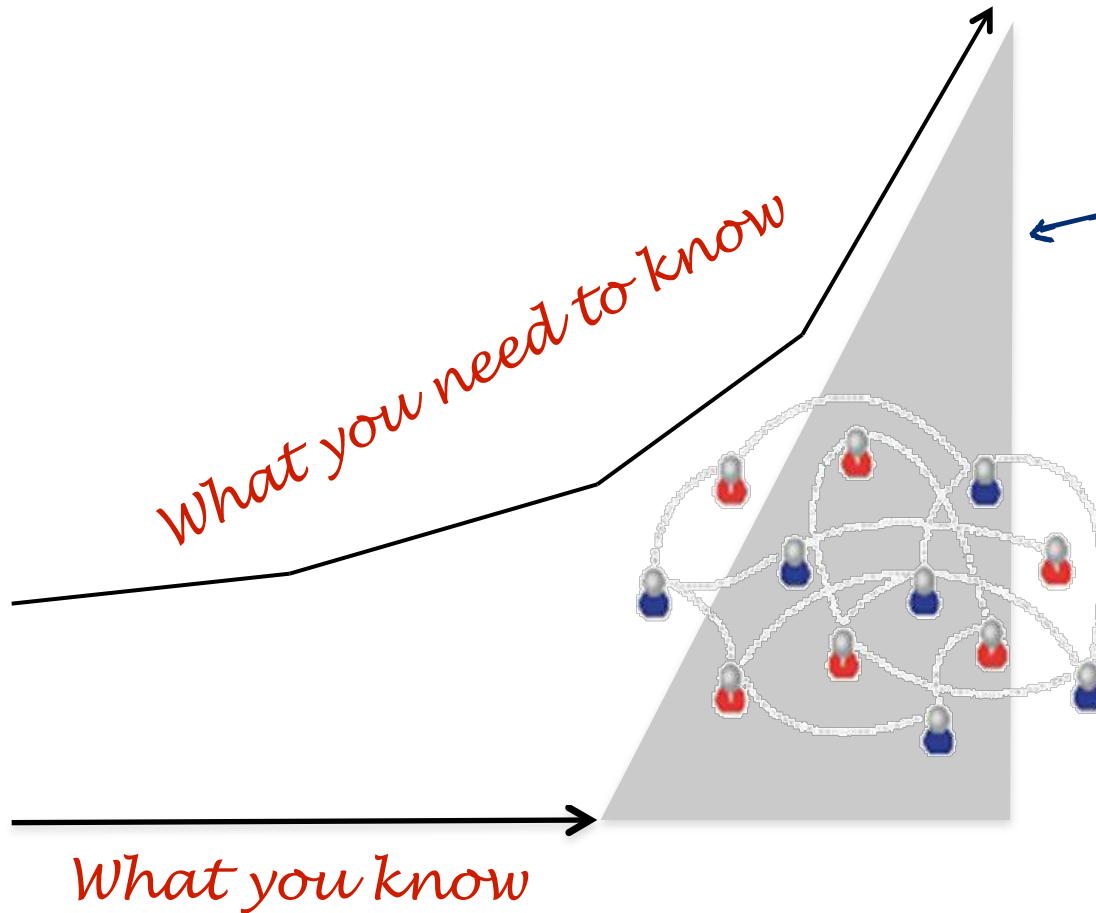
21st Century



21st Century

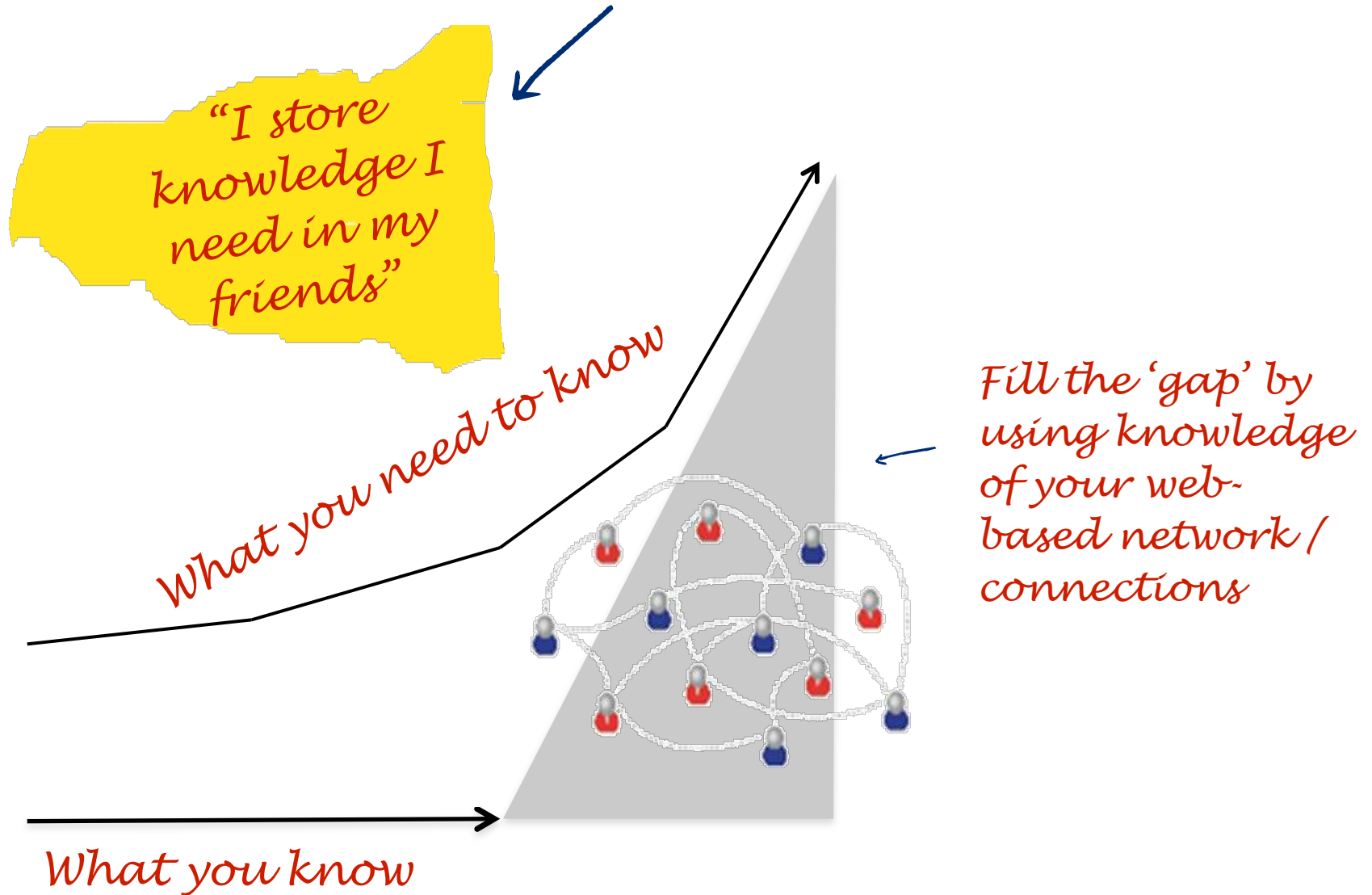


21st Century



Fill the 'gap'
by using
knowledge of
your
network /
connections

WEB-BASED SOCIAL LEARNING



a) Lessons from Vygotsky

Online Collaborative Learning Environment

- ☒ Enhance 'Zone of Proximal Development'
- ☒ Connect with many 'More Knowledgeable Others'

b) Lessons from Albert Bandura

Online Collaborative Learning Environment

- ☑ Social Constructivism - Modelling
 - Attention
 - Retention
 - Replication
 - Motivation
- ☑ Enhance 'Self-Efficacy'

c) Lessons from Lave and Wenger

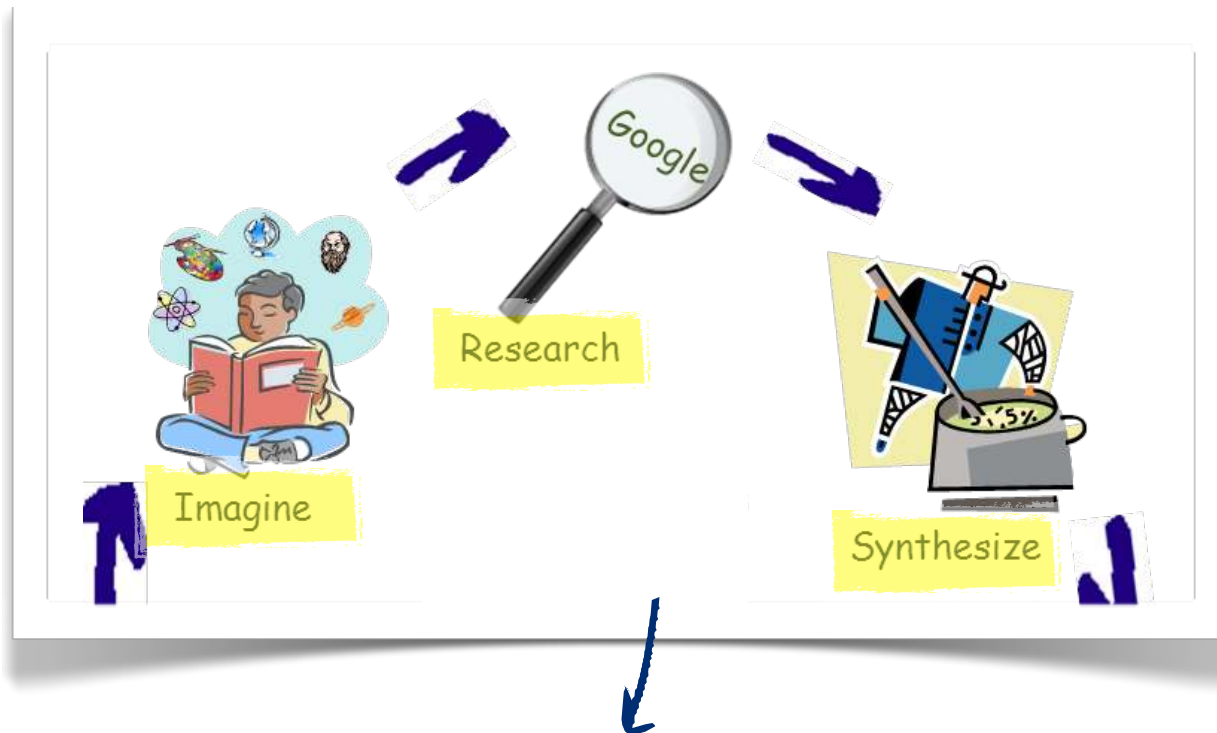
Online Collaborative Learning Environment

- ☑ *Situated Learning*
 - *Contextual Learning*
 - *Legitimate Peripheral Participation*

3. Role of Autonomous Learner in the Second Strand of Education

Learning Cycle in the Second Strand



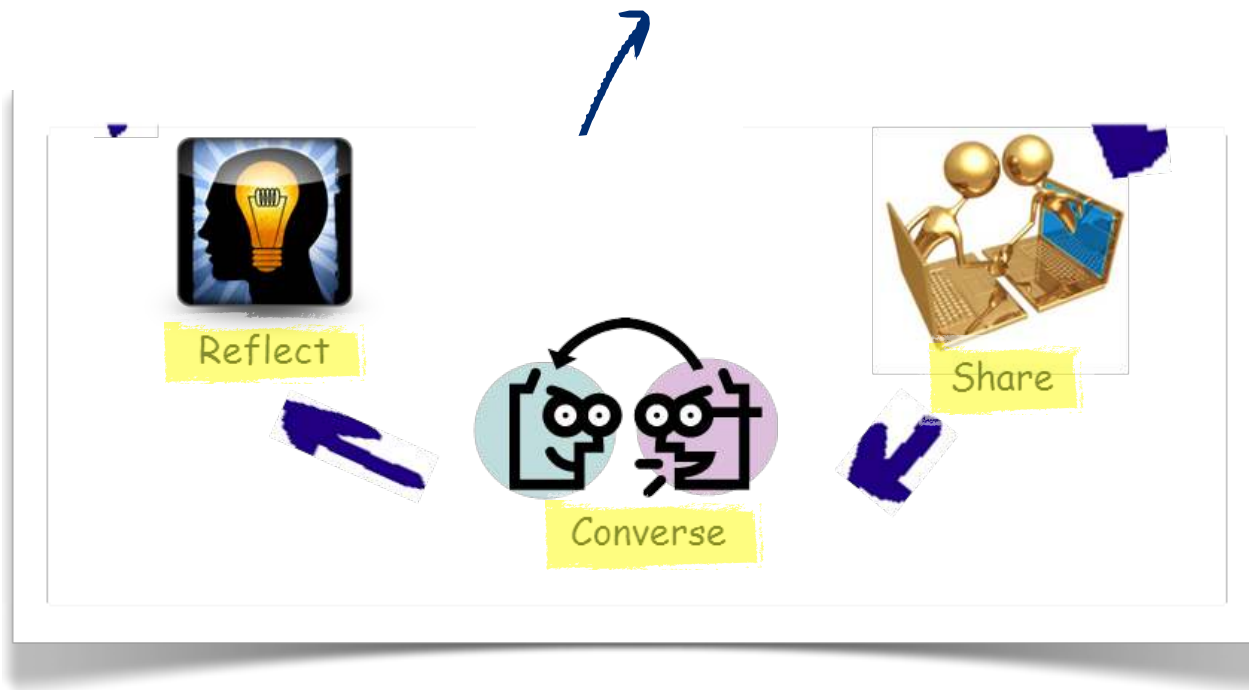


**Second Strand facilitates
Cognitivist Learning**

a) Web-based Cognitivist Learning

- ☑ www.AcademicEarth.org
- ☑ www.KhanAcademy.org
- ☑ www.JusticeHarvard.org
- ☑ www.Scribd.com
- ☑ www.Slideshare.com
- ☑ iTunes University
- ☑ MIT World (video lectures)

Second Strand facilitates Constructivist and Social Learning



b) Web-based Constructivist Learning

- ☑ *John Seely Brown's thinking*
 - *Online Study Groups*
 - *Learning by tinkering*
 - *Learning through play*
 - *Marinating in the problem space*

b) Web-based Constructivist Learning

- ☑ Online conversations for coherence and deep understanding - TED.com lectures and conversations
- ☑ Serious Gaming
 - www.EnergyVille.com
 - UNICEF games like Ayiti
 - World without Oil
- ☑ 'Apps' for mobile phones

Web-based Learning - CAUTIONS!

Nicolas Carr's views

- Internet is making us 'hunter gatherers' rather than 'cultivators'
- Skimming is becoming the dominant mode of thinking
- Every medium develops some cognitive skills at the expense of others

Cognitive Overload

- Multitasking and hypertext environment of the web, implies break in our concentration burdens or wipes our working memory

Good Reads and References

- George Siemen's Blog: <http://www.connectivism.ca/>
- Connectivism and Connective Knowledge MOOC - <http://cck11.mooc.ca/>
- Stephen Downes' website: <http://www.downes.ca/news/index.html>
- John Seely Brown's website: <http://www.johnseelybrown.com/>
- The Encyclopaedia of Informal Education : <http://www.infed.org/index.htm>
- Learning Theories: <http://www.learning-theories.com/>
- Learning Theories: <http://tip.psychology.org/theories.html>

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