SOLO Taxonomy and Assessing Student Thinking

Pam Hook

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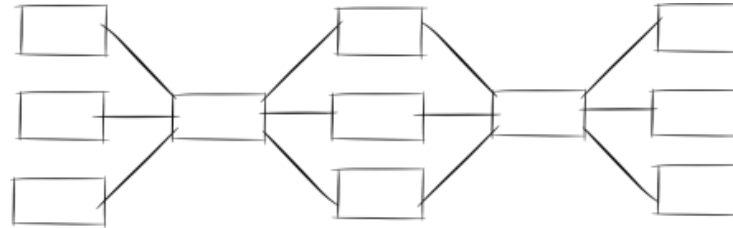
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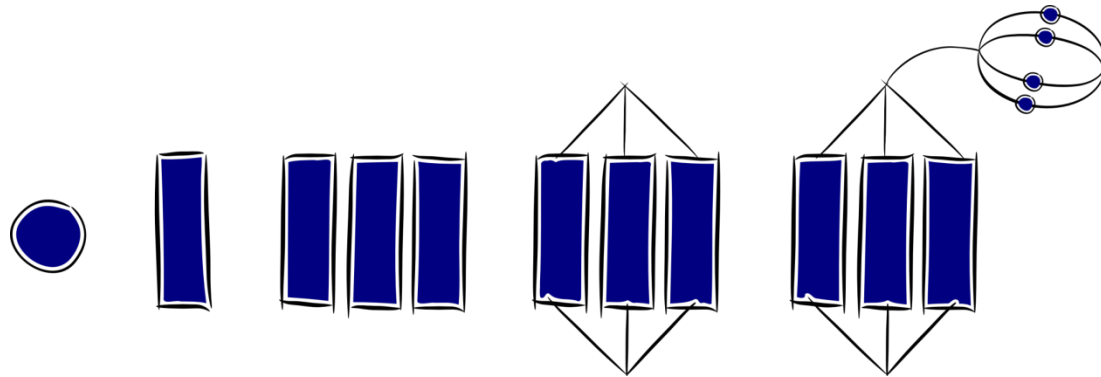
SOLO Taxonomy - Biggs and Collis 1982
The Structure of Observed of Learning Outcomes

Biggs, J.B., and Collis, K.F. (1982) Evaluating the Quality of Learning-the SOLO Taxonomy (1st ed) New York: Academic Press.

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Using SOLO Taxonomy Criterion Based Rubrics for Assessing Students Comparative Thinking

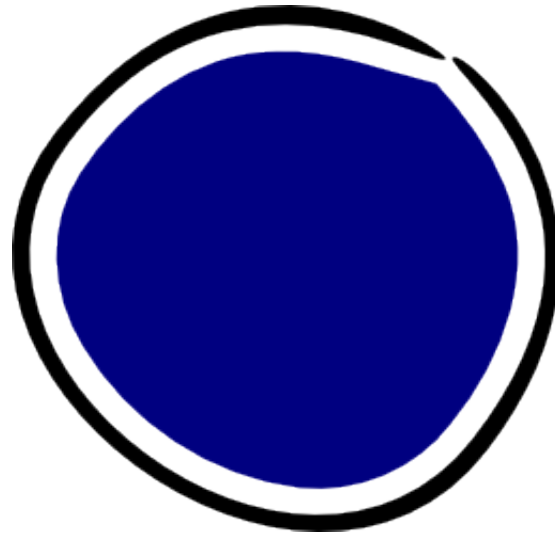**HOT Target Vocabulary:**

Compare:
Also, as, as well as, both, In the same manner, in the same way, like, likewise, most important, same, similar, similarly, the same as, too, still, in comparison, at the same time

Contrast:
Although, but, differ, even though, however, in contrast, instead, nevertheless, on the contrary, on the other hand, unless, unlike, while, yet, conversely, nonetheless

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SOLO PRESTRUCTURAL:

Learning outcomes for comparison show unconnected information, no organisation.

"I need help to compare X and Y."

SOLO PRESTRUCTURAL:
Learning outcomes for comparison
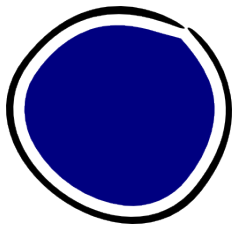show unconnected information, no organisation.

I need help to compare cats and dogs.
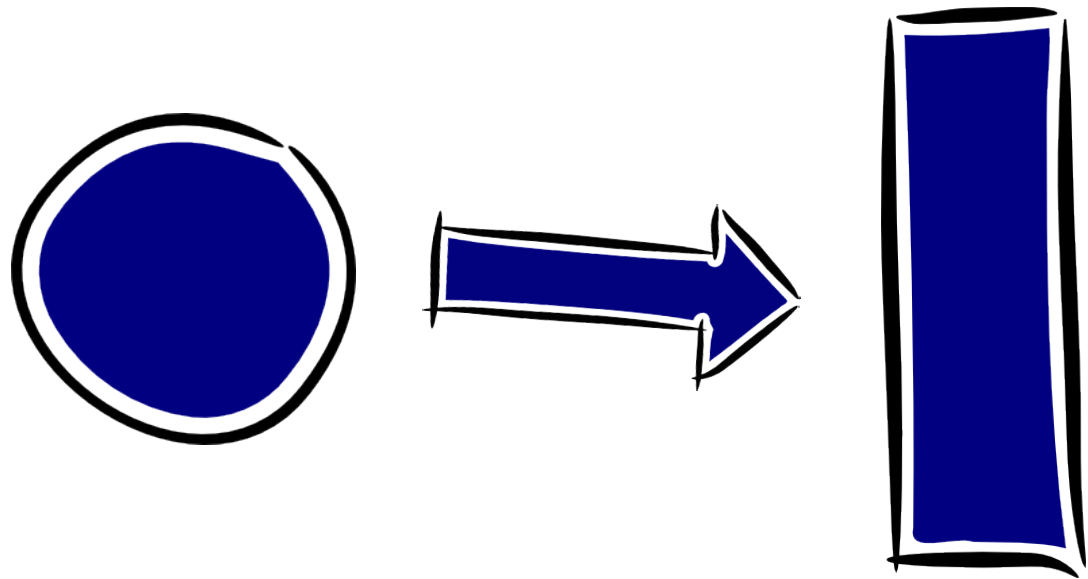
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SOLO PRESTRUCTURAL:
Learning outcomes for comparison
show unconnected information, no organisation.

Student Exemplar: *I saw a dog on the way to school.*
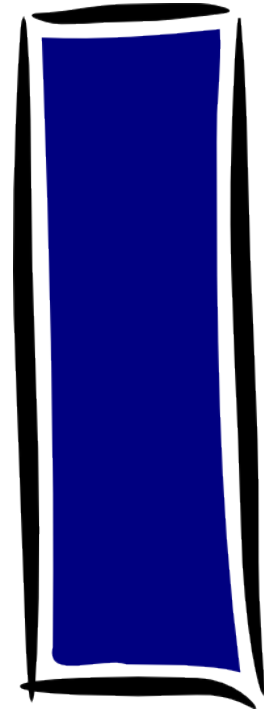
Where to next:

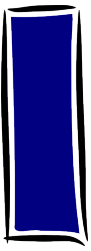For student with **pre-structural learning outcomes**.

SOLO UNISTRUCTURAL:

Learning outcomes for comparison show simple connections but importance not noted.

"I can identify one relevant similarity or difference between [X and Y] ..."
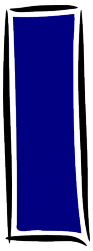
SOLO UNISTRUCTURAL:
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I can identify one relevant similarity or difference between [cats and dogs].

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SOLO UNISTRUCTURAL:
Learning outcomes for comparison
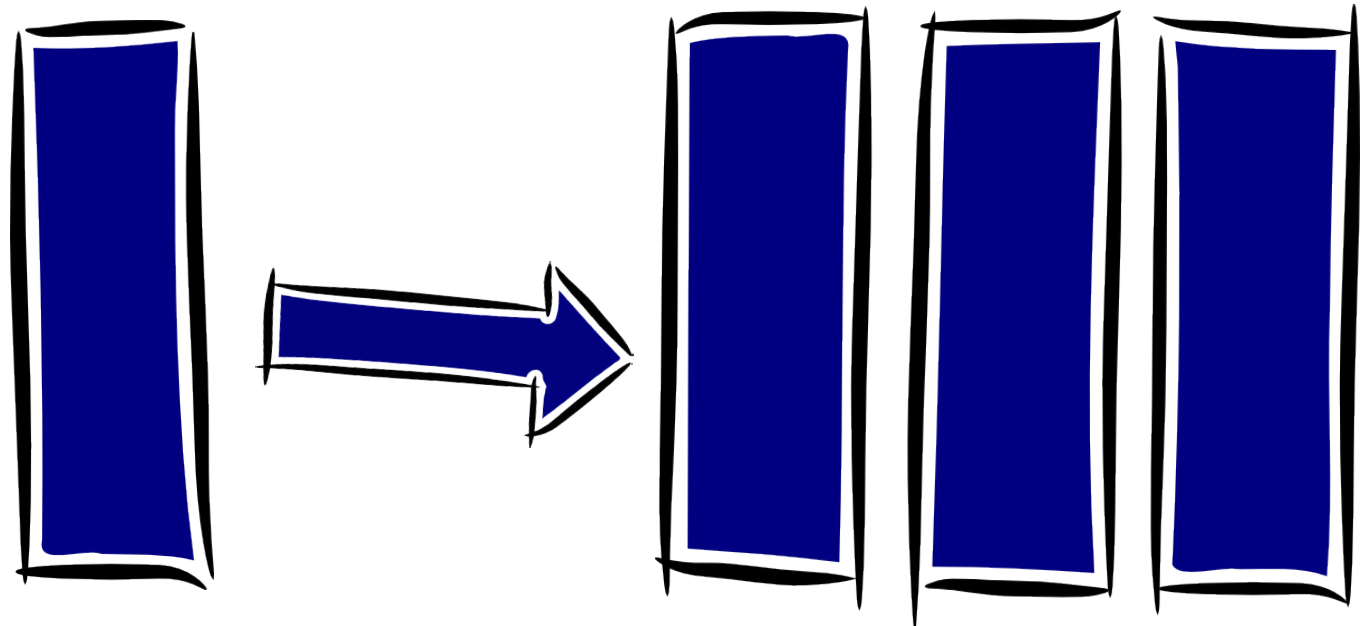show simple connections but importance not noted.

Student exemplar: *Cats and dogs are different. A cat purrs and meows and a dog barks and growls.*

Where to next:

For students with **unistructural learning outcomes**.

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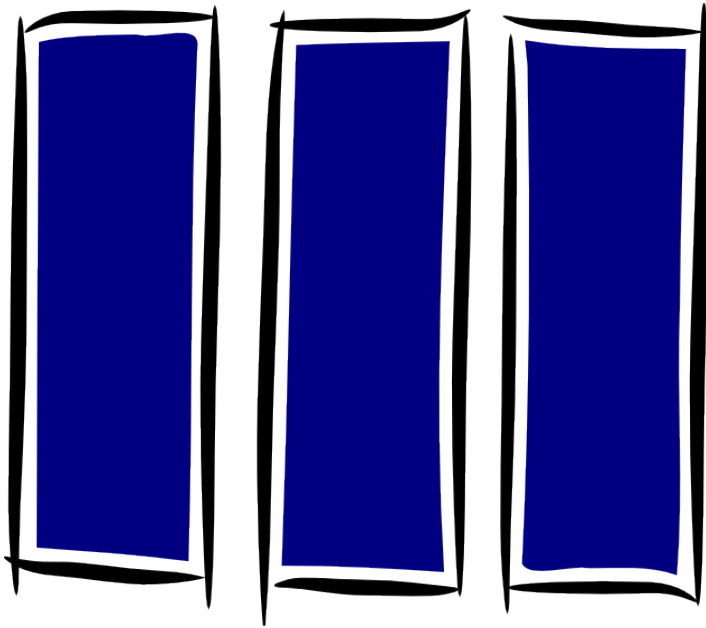
SOLO MULTISTRUCTURAL:

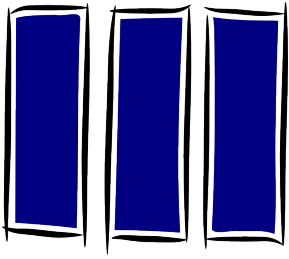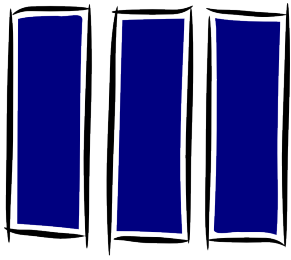Learning outcomes for comparison show connections are made, but significance to overall meaning is missing.

"I can identify several relevant similarities and differences between [X and Y].

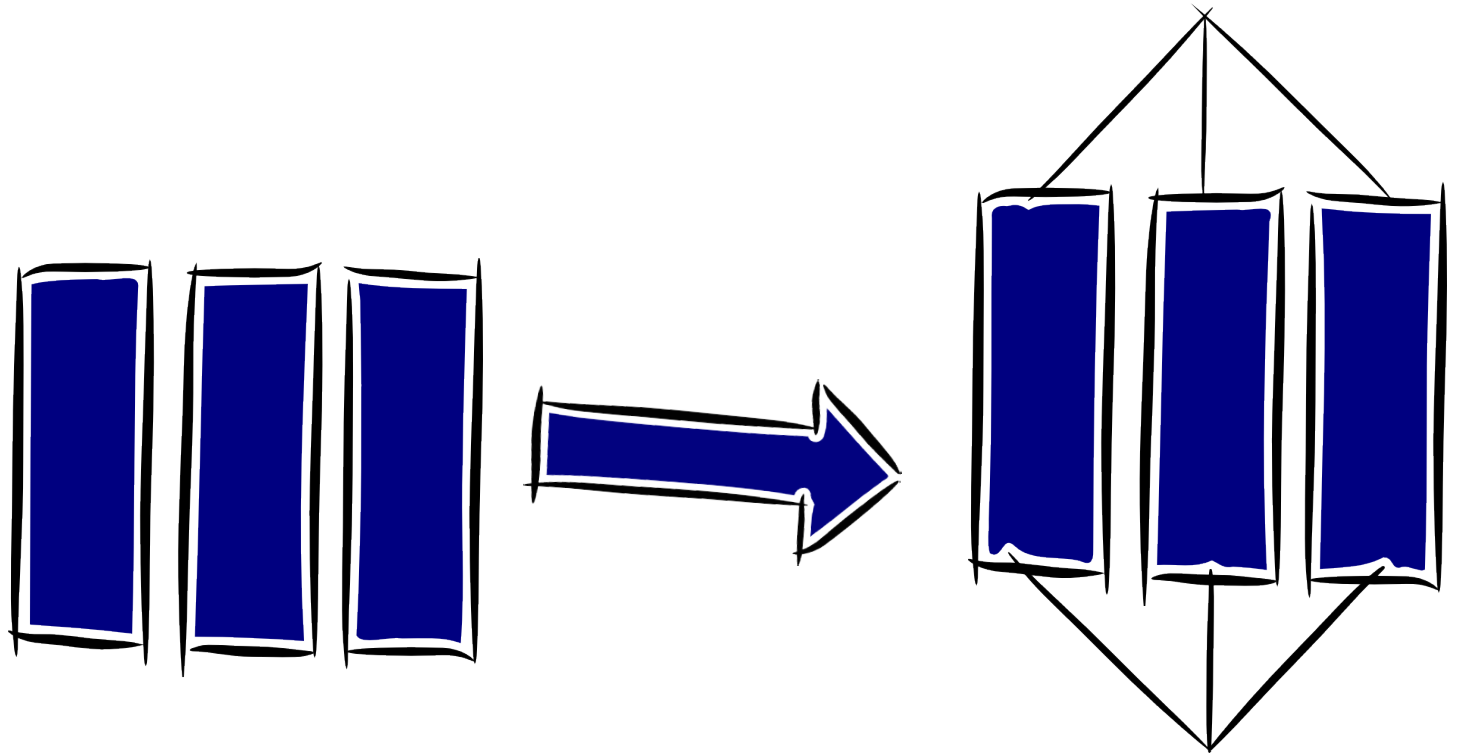**hooked**
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Listing similarities and differences

"I can identify several relevant similarities and differences between [a cat and a dog].

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Listing similarities and differences

Student Exemplar: Cats and dogs are different. A cat purrs and meows and a dog barks and growls. You take dogs for a walk, but cats exercise themselves. However, both dogs and cats are kept as pets. Both have four legs and fur.

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Listing similarities and differences

Where to next:

For student with **multi-structural learning outcomes**.

SOLO RELATIONAL:

Learning outcomes for comparison show full connections made, and synthesis of parts to the overall meaning

"I can identify several relevant similarities and differences between [X and Y] and can explain why they are similar and different."

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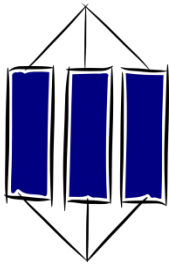
Explaining the significance of the similarities and differences – "these are similar because".

SOLO RELATIONAL:
Learning outcomes for comparison
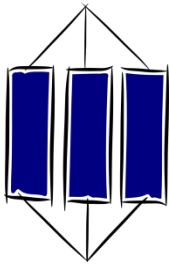show full connections made, and synthesis of parts to the overall meaning

"I can identify several relevant similarities and differences between [a cat and a dog] and can explain why they are similar and different."

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Explaining the significance of the similarities and differences – "these are similar because".
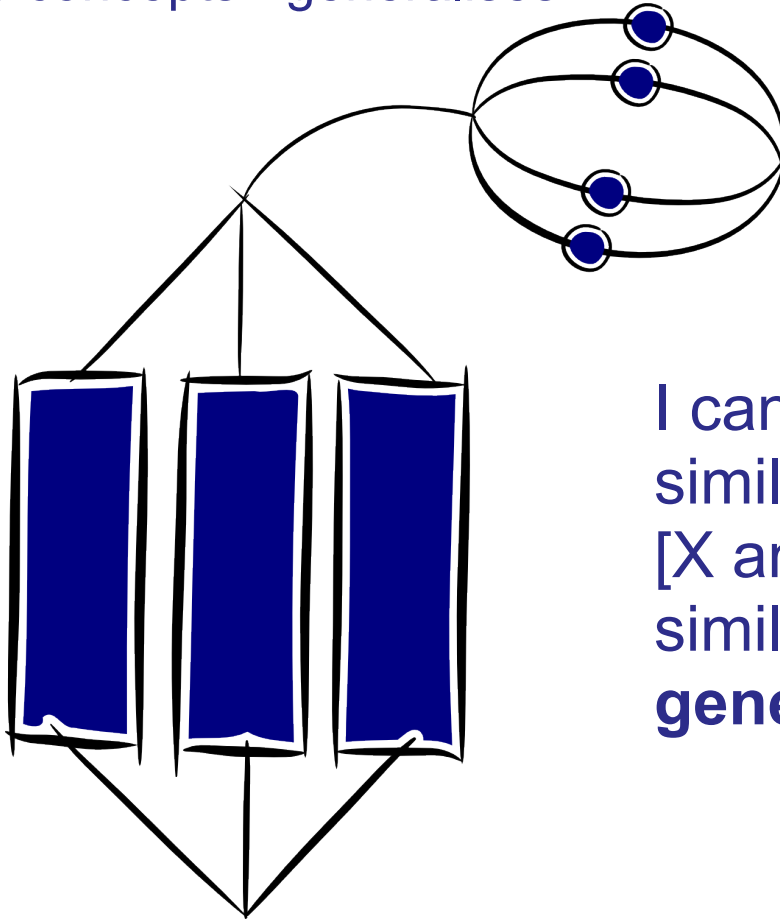
SOLO RELATIONAL:
Learning outcomes for comparison
show full connections made, and synthesis of parts to the overall meaning

Student exemplar: *Cats and dogs are different. A cat purrs and meows and a dog barks and growls. They **are different because** they use different sounds to communicate. You take dogs for a walk, but cats exercise themselves **they are different because** dogs are not allowed to roam freely on the streets. However, both of them are kept as pets. **They are similar because** they are both tame animals. Both have four legs and fur. **They are similar because** they are both mammals.*

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SOLO EXTENDED ABSTRACT:

Learning outcomes for comparison go beyond subject and makes links to other concepts - generalises
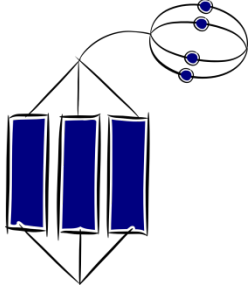
I can identify several relevant similarities and differences between [X and Y], explain why they are similar and different **AND make a generalisation**.
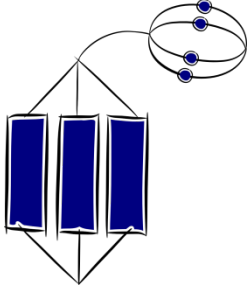
(overall … because)

SOLO EXTENDED ABSTRACT:
Learning outcomes for comparison go beyond subject
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I can identify several relevant similarities and differences between [cats and dogs], explain the similarities and differences **AND make a generalisation**.
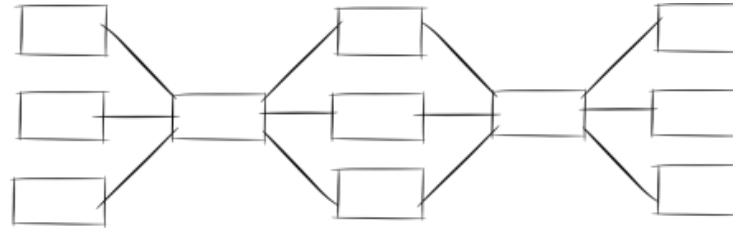
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(overall … because)

SOLO EXTENDED ABSTRACT:
Learning outcomes go beyond subject and makes links
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Student exemplar: *Cats and dogs are different. A cat purrs and meows and a dog barks and growls. They **are different because** they use different sounds to communicate. You take dogs for a walk, but cats exercise themselves **they are different because** dogs are not allowed to roam freely on the streets. However, both of them are kept as pets. **They are similar because** they are both tame animals. Both have four legs and fur. **They are similar because** they are both mammals. **Overall I think*** cats and dogs are more similar than different. This is probably because they are both domesticated and have lived alongside human beings for a long time.

Using SOLO Taxonomy Criterion Based Rubrics for Assessing Students Comparative Thinking
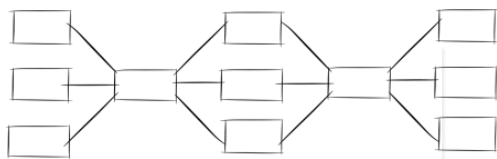
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Refer http://hooked-on-thinking.wikispaces.com/The+Language+of+Learning#toc1

	I can identify several relevant similarities and differences between [X and Y], explain why they are similar and different **AND make a generalisation**.
	*I can identify several relevant similarities and differences between [X and Y] **and can explain why** they are similar and different.*
	*I can identify several relevant similarities **and** differences between [X and Y].*
	I can identify one relevant similarity **or** difference between [X and Y] .
	I need help to compare X and Y.

Refer http://hooked-on-thinking.wikispaces. com/The+Language+of+L earning#toc1

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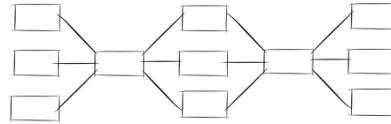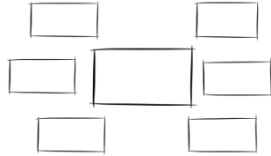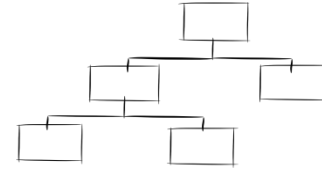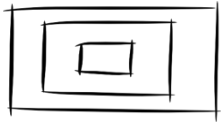www.hooked-on-thinking.com

How reliable and/or valid is student self assessment of thinking?

Measuring the degree of correlation between student self assessment and peer/teacher assessment.

Peer or Teacher Assessment
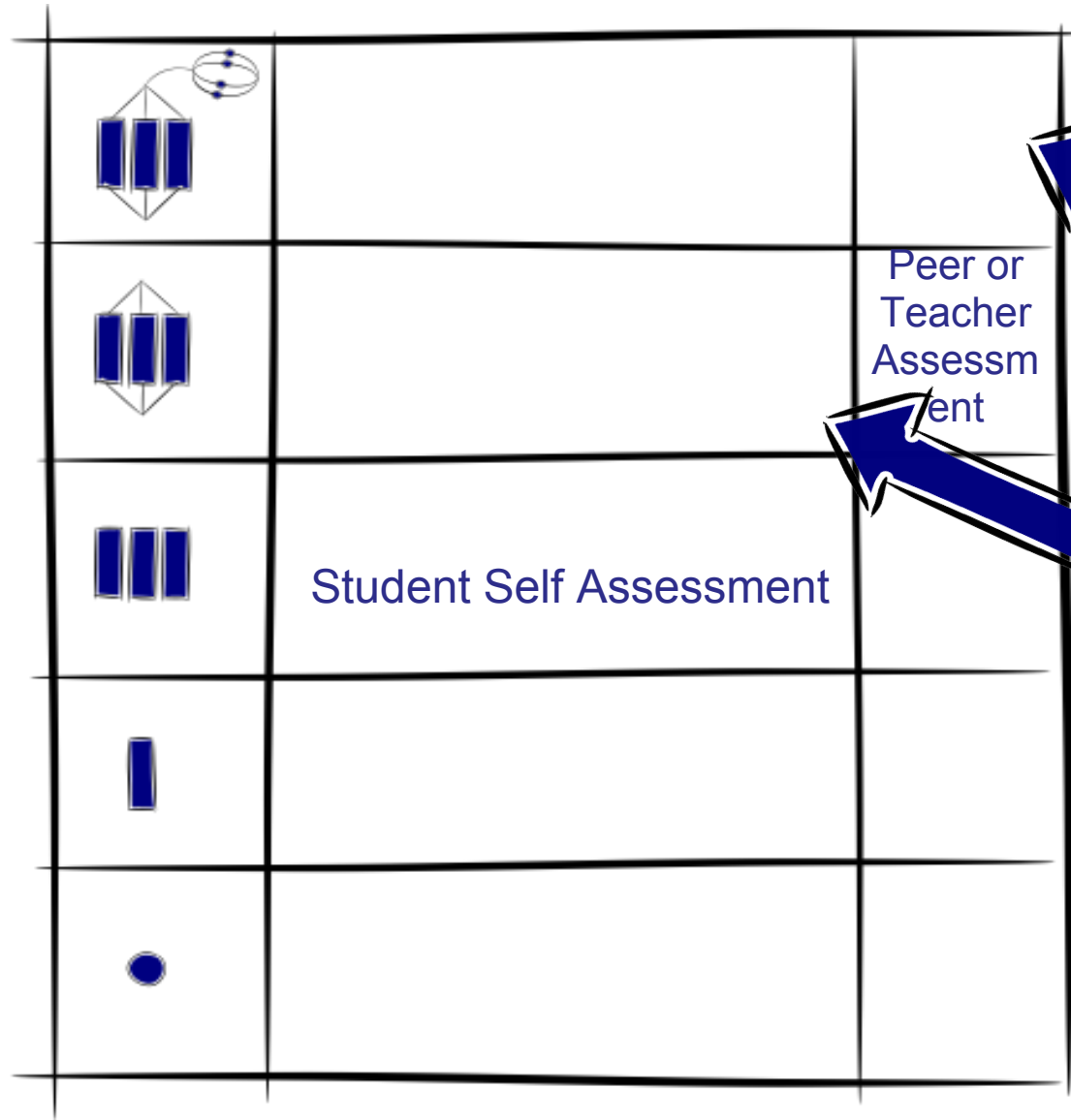
Student Self Assessment
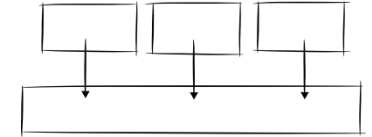
Where to next? – Using SOLO Taxonomy to build criterion based self assessment rubrics for student thinking for different thinking strategies.
E.g.. definition, description, sequencing, classification, causal explanation, analysis, prediction, generalisation and evaluation..

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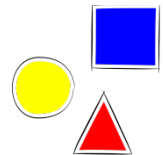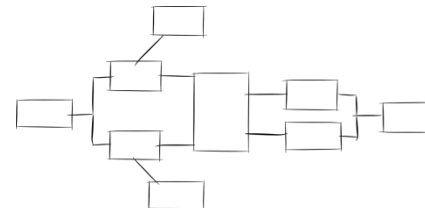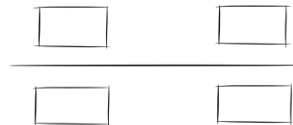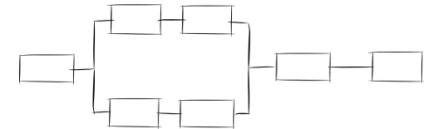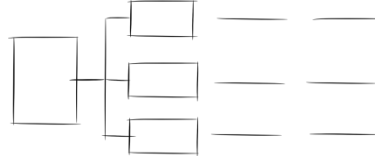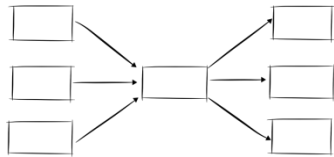
transforming learning outcomes

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