SOLO Taxonomy and Assessing Student Thinking

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

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

I can identify one relevant similarity or difference between [cats and dogs].
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**.
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].

Listing similarities and differences
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 [a cat and a dog].

Listing similarities and differences
SOLO MULTISTRUCTURAL: Learning outcomes for comparison show connections are made, but significance to overall meaning is missing.

**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.

**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.”

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.”

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

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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 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.
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 and makes links to other concepts - generalises

I can identify several relevant similarities and differences between [cats and dogs], explain the similarities and differences AND make a generalisation.

(overall ... because)
Solo Extended Abstract:
Learning outcomes go beyond subject and makes links to other concepts - generalises.

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.
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HOT Target Vocabulary:

Compare:
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Refer [http://hooked-on-thinking.wikispaces.com/The+Language+of+Learning#toc1](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.
How reliable and/or valid is student self assessment of thinking?

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