

## Differentiating ICT Interventions – Coding e-learning against SOLO learning outcomes.

ICT (e-learning) interventions can be more effectively used by students to personalise their learning when they are coded against learning outcomes in SOLO taxonomy.

A focus on SOLO coded learning outcomes allows us to look at ICTs as learning interventions in the following ways.

1. How ICT Applications align with the conditions of value for a specific student learning outcomes (SOLO)
2. How an ICT application can be used to enhance the conditions of value for different learning outcomes (SOLO)

### 1. ICT Applications to enhance the conditions of value for student learning outcomes (SOLO)

[http://pamhook.com/wiki/ICT\\_Apps\\_and\\_SOLO\\_Taxonomy](http://pamhook.com/wiki/ICT_Apps_and_SOLO_Taxonomy)

#### **a). ICT to enhance the conditions of value for bringing in and recording ideas**

(i.e. enhancing the conditions of value when students define, describe, list, name, label)

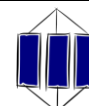


*For example, directories/ search engines, Google map; concept mapping; word processing; databases/ spread sheets; environmental probes, Web 2.0 based: image storing, word processing, social bookmarking "to do" lists, notetaking, calendars, group mapping, aggregators, RSS feeds, blogs, wikis, forums, synchronous/synchronous communication, peer to peer networks, podcasting, SMS text, ism, email, fax, telephone, listservs, newsgroups;*

[http://pamhook.com/wiki/ICT\\_Apps\\_and\\_SOLO\\_Taxonomy#Bringing\\_in\\_Knowledge\\_-\\_Multistructural\\_Outcome](http://pamhook.com/wiki/ICT_Apps_and_SOLO_Taxonomy#Bringing_in_Knowledge_-_Multistructural_Outcome)

#### **b). ICT to enhance the conditions of value for linking ideas**

(i.e. enhancing the conditions of value when students sequence, classify, compare and contrast, cause, part whole, analogy)

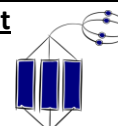


*For example, concept mapping, graphic organisers, simulations, domain specific modelling software; microworlds spreadsheets;*

[http://pamhook.com/wiki/ICT\\_Apps\\_and\\_SOLO\\_Taxonomy#Connecting\\_Knowledge\\_-\\_Relational\\_Outcome](http://pamhook.com/wiki/ICT_Apps_and_SOLO_Taxonomy#Connecting_Knowledge_-_Relational_Outcome)

#### **c). ICT to enhance the conditions of value for taking these linked ideas beyond the subject**

(i.e. enhancing the conditions of value when students generalise, reflect, predict, create, imagine, judge, evaluate)





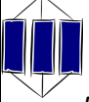
*For example, multimedia hypermedia authoring software, argument mapping software, PowerPoint, asynchronous/synchronous communication; Peer to peer networks, podcasting, SMS text, ism, email, fax, telephone, listservs, newsgroups, blogs, wikis*

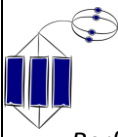
[http://pamhook.com/wiki/ICT\\_Apps\\_and\\_SOLO\\_Taxonomy#Creating\\_New\\_Knowledge\\_-\\_Extended\\_Abstract\\_Outcome](http://pamhook.com/wiki/ICT_Apps_and_SOLO_Taxonomy#Creating_New_Knowledge_-_Extended_Abstract_Outcome)

## 2. How an ICT application is used to enhance differentiated learning outcomes (SOLO)

For example, MS Photostory3 is a software application commonly used by students to make movies to communicate new understandings (performance for understanding). However, when you think about the conditions of value during the learning process, MS Photostory3 can be used across differentiated SOLO coded learning outcomes.

[http://pamhook.com/wiki/Using\\_ICTs\\_and\\_SOLO\\_Taxonomy](http://pamhook.com/wiki/Using_ICTs_and_SOLO_Taxonomy)

How to integrate ICTs to enhance the conditions for differentiated learning outcomes	
 <p><b>Needs help (SOLO Prestructural)</b></p> <p><i>When students start a new topic they may have no prior knowledge of the topic or the software. Before they can start they need help to learn how to...</i></p>	<p>Take photos Download photos from camera to resources. Save photos Find copyright free photos on intranet Import photos Select multiple images etc</p>
 <p><b>Bringing in Ideas (SOLO Uni /multi structural)</b></p> <p><i>Once the student has mastered the use of the software they need to bring in ideas, both textual and visual images related to the topic.</i></p>	<p>Use MSPhotostory3 to bring in new visual, oral and text ideas. Collect images/ quotes to introduce new topic or vocabulary. Retell events using image, voice and text. Label, list, define, describe, retell, recall, recite. Eg. Native birds labelled/ Trip photos labelled</p>
 <p><b>Linking ideas (SOLO Relational)</b></p> <p><i>For more complex understanding of the topic the student needs to link these ideas to better explain the whole. They may sequence, compare and contrast, classify, determine causality, analyse through part whole analysis, form analogies, formulate questions, explain.</i></p>	<p>Arrange labelled images on a timeline to represent process, or story (sequence) Group images related to topic (classify) Explain similarities and differences using images, text and voice(Compare/contrast) Ask questions about images to use as an interviewing platform or use images as a stimulus to capture questions and responses for interviewing different people/situations.</p> <p>Take pictures of whole and the important parts of an object or an idea. Use text and or voice to explain how each contributes to the whole, e.g. Photo of the school and pictures of people who work there Photo of event or situation or artwork or poem then look at different parts or show different peoples perspectives Animal and close ups of features and explain</p>

	<p>adaptations</p> <p>Describe an event (visual, text or sound) Ask students to collect images that might have contributed to this. (Causal explanation) E.g Traffic chaos at the school gate, what causes this? Bullying/ litter</p>
 <p><b>Taking linked ideas into another context (SOLO Extended abstract)</b></p> <p><i>Performance for understanding. Students put linked ideas into another context – using MSPhotostory3 to predict, hypothesise, generalise, imagine, reflect, evaluate and create.</i></p>	<p>Prediction - Describe an event or situation (visual text or sound) and ask students to collect images etc to represent what might happen next (Prediction)</p> <p>Personal reflection, (Reflection)</p> <p>Poetic writing – ask students to create a multimedia response using using text supported by images and sound (Create).</p> <p>What if ... use an image/ voice or text about a situation and ask student to respond using images sound or text (Imagination)</p> <p>Persuasive argument, ask students to evaluate a claim/ scenario and present their argument using images sound or text (Evaluate)</p>

#### See also

##### **SOLO Coded ICT Interventions Handout -**

[http://pamhook.com/wiki/Using\\_ICTs\\_and\\_SOLO\\_Taxonomy](http://pamhook.com/wiki/Using_ICTs_and_SOLO_Taxonomy)

##### **SOLO Coded Web2.0 Interventions Handout -**

[http://pamhook.com/wiki/Web2.0\\_and\\_SOLO\\_Taxonomy](http://pamhook.com/wiki/Web2.0_and_SOLO_Taxonomy)

##### **SOLO Coded Google Applications Handout -**

[http://pamhook.com/wiki/Google\\_Apps\\_and\\_SOLO\\_Taxonomy](http://pamhook.com/wiki/Google_Apps_and_SOLO_Taxonomy)

##### **Purposeful use of ICTs Handout -**

[http://pamhook.com/wiki/ICT\\_Apps\\_and\\_SOLO\\_Taxonomy#Purposeful\\_Use\\_of\\_ICTs\\_-\\_Self\\_Assessment\\_Rubric](http://pamhook.com/wiki/ICT_Apps_and_SOLO_Taxonomy#Purposeful_Use_of_ICTs_-_Self_Assessment_Rubric)