

Showcasing full course hyperlinking for large classes with different backgrounds

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The principle and practice of giving students just what they need through full course hyperlinking



Presentation outline

- ➔ Viewpoint
- ➔ The Problem in lecturing Practice
- ➔ The Previous situation
- ➔ Developments up to Present
- ➔ Potential alternatives
- ➔ Definitions, assumption
- ➔ Presented Pedagogical model
- ➔ Advantages
- ➔ Layered Velcro principle of learning
- ➔ The layers of learning for ELCB example:
- ➔ “Earth Leakage Circuit-Breaker”
- ➔ Method
- ➔ Long-term goal



Viewpoint

- ➔ I am advocating complete course hyperlinking, where only dictionary words are not defined.
(It is up to the student to ensure that he has mastered -- or she has mistressed?-- the basic material.)



The Previous Situation

- ➔ As an undergraduate I was expected to find out the meaning of all terminology that the lecturers could throw at us.
- ➔ I still have my copy of “Dictionary of Science” & “Dictionary of Building”



The problem in lecturing practice

- ➔ Students from many different backgrounds have different vocabulary sets.
- ➔ It is the responsibility of the student / lecturer to ensure that they find out / explain the meaning of words & terminology used in the course.
- ➔ The problem is exacerbated in large classes, as there is then a greater chance of encountering a student who doesn't understand a key word / phrase. Large classes ➔ More outlier students at both ends of the spectrum



Developments up to present

- ➔ Students with mistaken beliefs
- ➔ A common problem of the student finding def^{ns} that use words that are not in the vocabulary set of the student.
- ➔ To avoid this difficulty I recommend fully hyperlinked dictionaries, which of course can only be provided in software.



Potential Alternatives

- ➔ Paper-based dictionaries
- ➔ Online (cloud) dictionaries (Wiki-)
- ➔ Offline dictionaries

I recommend TheSage for use on computers & WordWeb for use on the iPod. (Both are free, & are fully hyperlinked).



LookUp

showcase

* Wildcard

Anagram

showcase

showcase /'ʃəʊkɛɪs/

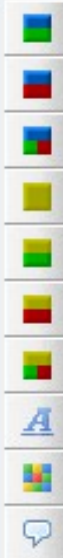
Noun

1. A glass container used to store and display items in a shop or museum or home.

2. A setting in which something can be displayed to best effect.

Synonym: Show window.

Hypemym: Background, scope, setting.



Definition

➔ We can define the student's knowledge of a technical word / term as being an Unknown Word / Partially known word / a Fully known word.

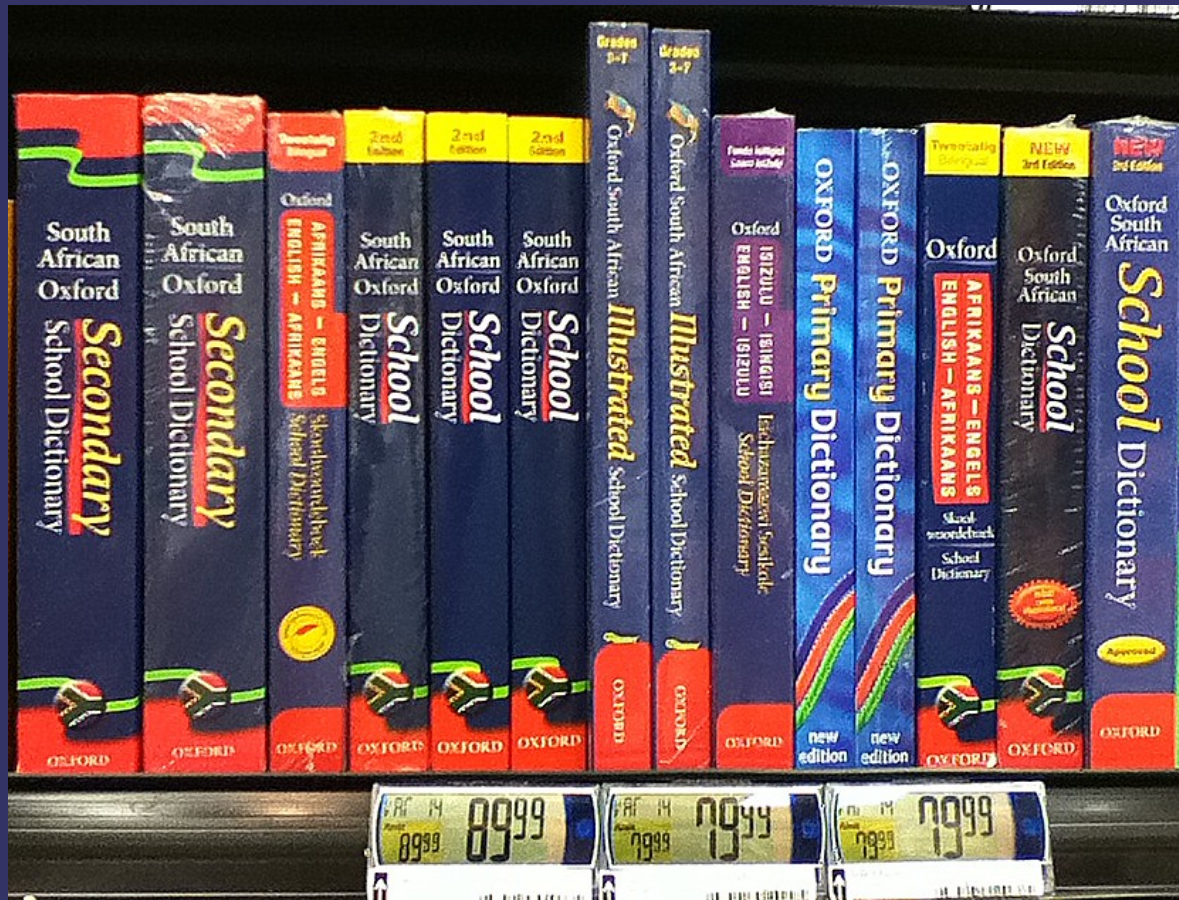
(It is part of our job to get the student from Unknown → Fully known def^{ns}.)

➔ **Full course hyperlinking** is where every technical word / term in the course is defined, even in those definitions.



Assumption

- ➔ We assume that the student does know the words in a standard dictionary / can look them up. There are available pocket size dictionaries.



Presented pedagogical model

- ➔ The Layered Velcro model [Kennedy I .G., 2011
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with different backgrounds !]



Velcro



Layered Velcro principle of learning

- ➔ Students hook their learning onto what they already know.
- ➔ This creates problems when the lecturer is attempting to teach the student something for which they have nothing to hook the new knowledge onto.
- ➔ The acquisition of knowledge is likened to Velcro on material that is Velcroed onto *other* material that has already been internalized by the student.

(Worse still is the situation where the most underlying /intermediate material does not exist.)



The layers of learning for ELCB

Earth Leakage	Circuit-Breaker
Earth leakage protection	An electrical circuit
An electrical installation	electrical conductor
electricity consumer	Dictionary term
Dictionary term	



Example: ELCB

- ➔ In the learning of the SANS 10142, The Code of Practice for the Wiring of Premises, one outcome is that the student can define the function of an ELCB.
- ➔ The following slide shows the one bi-furcate path through the Velcro layers.
- ➔ Definitions are in **bold**; hyperlinks are underlined.



“Earth Leakage Circuit-Breaker”

- ➔ **Earth leakage** protection is the process of detecting when the return current to earth is over a safe value & automatically breaking the continuity of the circuit to ensure the safety of an electrical installation.
- ➔ **An electrical installation** is a building or place that provides electricity for use by electricity consumers.
- ➔ **A consumer of electricity** is a person who uses electricity. The person is supplied either by an electricity supplier, or the person may provide his own electricity for his own use.
- ➔ **An electricity supplier** is any local authority, statutory body or person who supplies, contracts / agrees to supply electricity. {DICTIONARY REACHED}



Circuit-Breaker

- ➔ A **circuit breaker** is a device that operates like a switch and automatically opens the electrical circuit when overloaded.
- ➔ An electrical circuit is the arrangement of electrical conductors for the purpose of carrying electric current.
- ➔ An **electrical conductor** is material that is capable of carrying an electric current. {DICTIONARY REACHED AGAIN: HOORAY!}



Method

1. The relevant passages were paraphrased to remove the legalistic “shall” constructs that interfere with student thinking.
2. All terms not in an online dictionary were defined via hyperlinks.
3. All terms in the def^{ns} not in the dictionary were also hyperlinked, until all unknown terms were defined.
4. All nouns not in the dictionary are ultimately to be illustrated by means of a suitable image from a Google Image search. Suggestions were accepted from students in the class in a previous year.



Long-term goal

- ➔ Our code of TEACHING practice should be to leave no (non-dictionary) term undefined.
- ➔ That is, we should hyperlink and define all terms that are not in a common dictionary.

THANK YOU

