Introduction to Digital Learning Object

Fakulti Sains Sosial dan Kemanusiaan UTM

Digital Learning Objects (DLO)

- What is digital learning objects (DLO)?
  - Computer applications that focus on a small concept aims to facilitate the process of understanding.
  - A DLO is often likened to LEGO building blocks i.e. building blocks (photos, text, sound, video) that separately do not constitute a comprehensive learning experience.
  - DLO may be combined with others to produce a more complete concept - when the individual pieces are connected and arranged they create useful items such as houses, bridges, etc.
  - Most importantly, DLOs are T&L objects.

Digital Learning Objects (DLO)

- The idea of digital learning objects is to create digital media content that is:
  - interoperable - can "plug-and-play" with any system or delivery tool
  - reusable - can be used or adapted for use in multiple learning events
  - accessible - can be stored a way that allows for easy search ability
  - manageable - can be tracked and updated over time

Digital Learning Objects (DLO)

- Digital learning object definitions vary greatly, however the basic idea behind learning objects are as follows:
  - "Any digital resource that can be reused to support learning" (David Wiley, 2002)
  - "Any entity, digital or non-digital, that can be used, re-used, or referenced during technology supported learning"(IEEE Learning Technology Standards Committee)
  - "the holy grail of digital content creation"(Polsani, Feb. 2003, p1)

Digital Learning Objects (DLO)

continued

"New Media Consortium (NMC) defines digital learning objects (DLOs) as small reusable units that can be fitted together in any number of ways to produce customized experiences tied to an educational objective."

Digital Learning Objects (DLO)

- Digital learning objects are also known as the following :

- Knowledge Object
- Asset
- Content Object
- Educational Object
- Information Object
- Learning resource
- Media object
- raw media element
- intelligent object
- reusable information object
- reusable learning object
- unit of learning
- unit of study
- data object
- instructional object

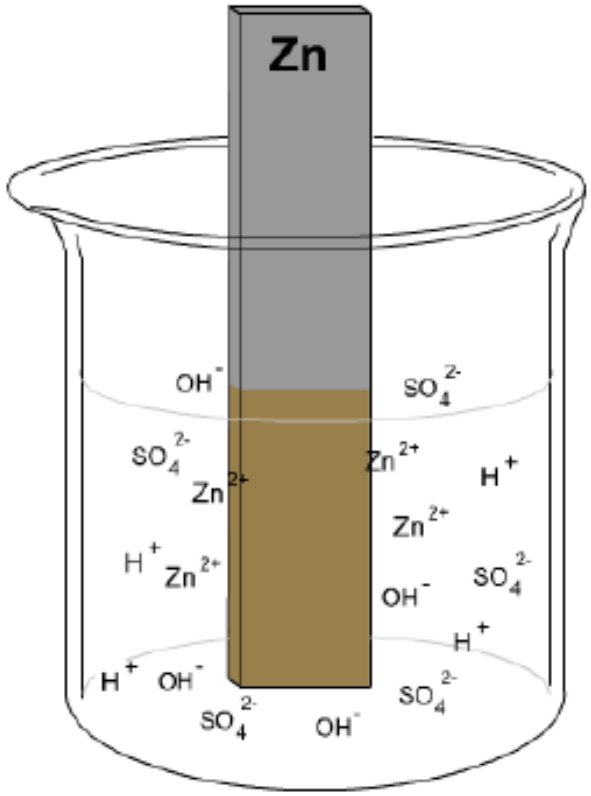
Digital Learning Objects (DLO)

- Example of digital learning objects (DLO):
  - Science: Chain Reaction

Digital Learning Objects (DLO)

continued

– Chemistry: Experiment Zink



Experiment Zn - $CuSO_4$

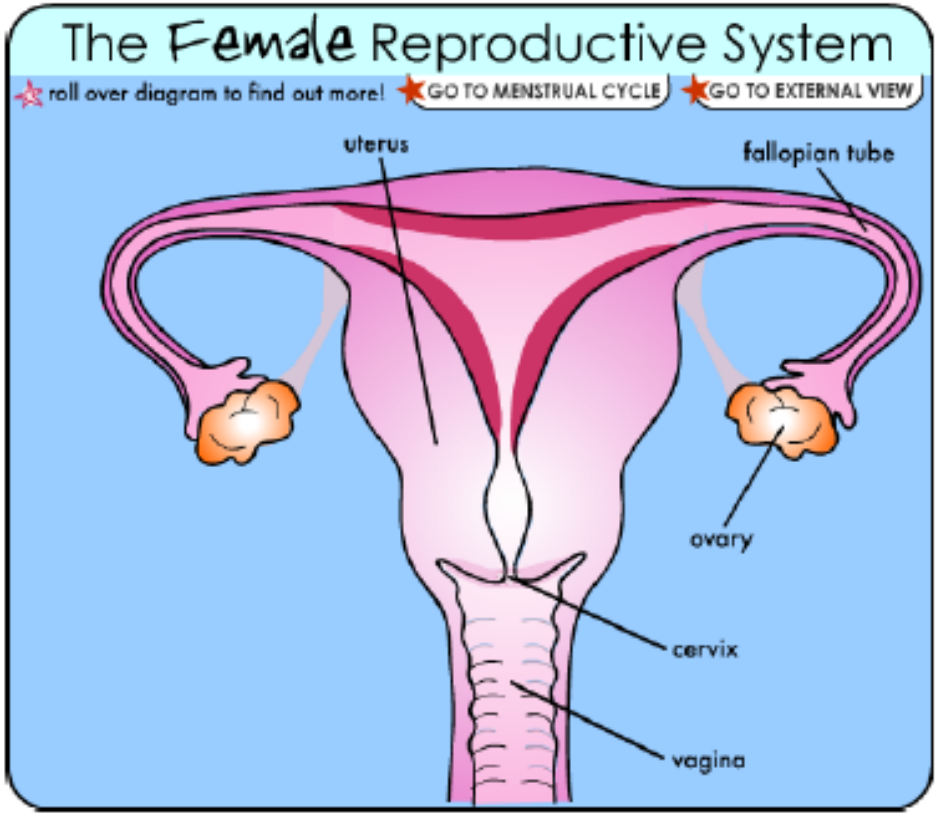
The Process That Had Taken Place.

1. **Copper ions are attracted and move towards the zinc strip.**
2. **Zinc strip is ionize to zinc ions.**
3. **A brown solid is formed at half part of zinc strip.**
4. **The blue of copper sulphate solution turns colourless.**

Digital Learning Objects (DLO)

continued

– Biology: Female reproductive system



Digital Learning Objects (DLO)

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Literacy digital learning objects

Five Digi Tips Home

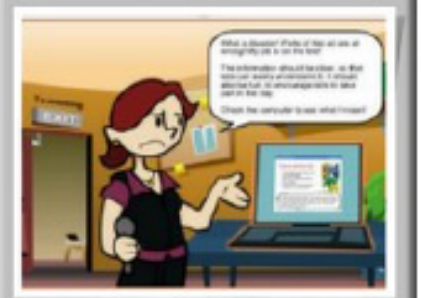
Lower and middle primary | Upper primary and lower secondary | Upper secondary

Click on the learning objects shown below to be taken to a page with five tips on how that object could be used.

Letter Planet Series (5)

Topics covered	Age guide
Initial consonants Sequencing	Lower primary

Fix the Mix-up Series (4)

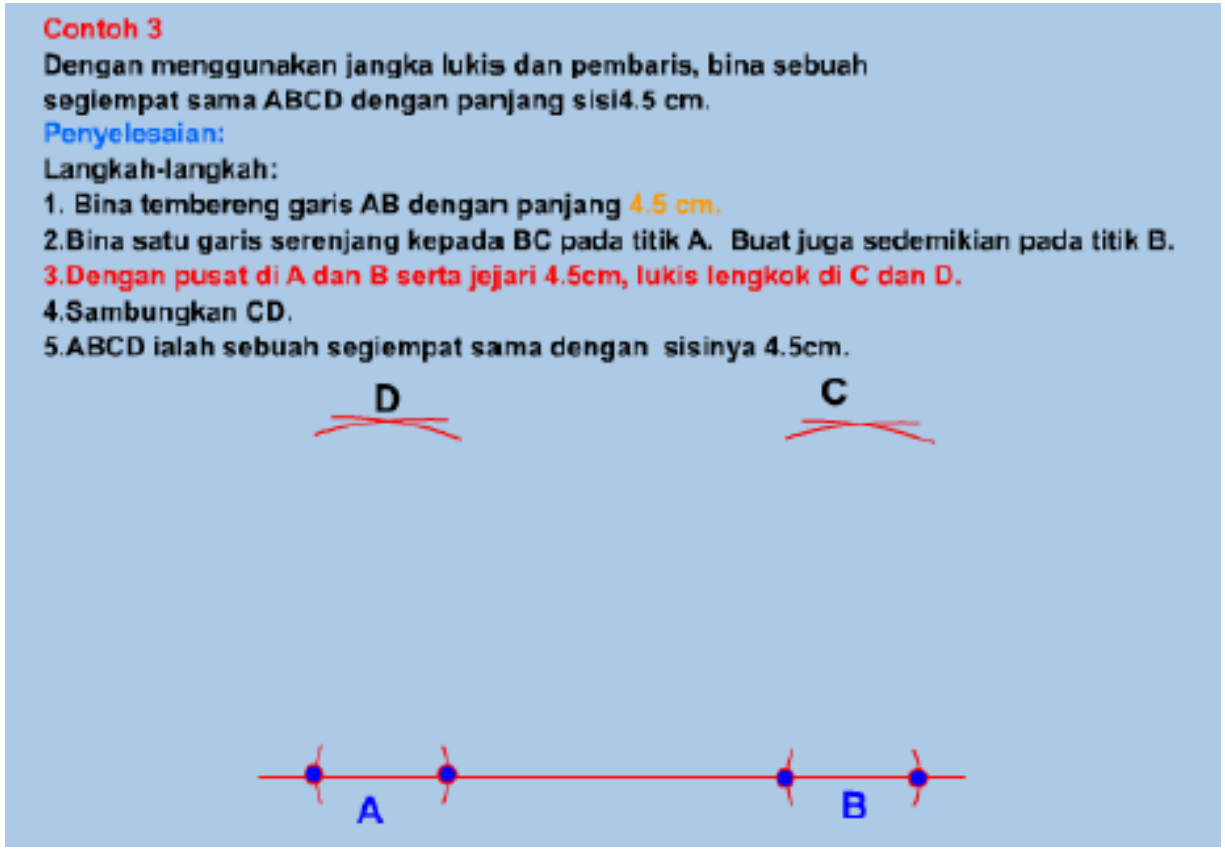


Topics covered	Age guide
Writing for different contexts, audiences and purposes Appropriate tone	Middle primary

Digital Learning Objects (DLO)

Continued

– Mathematics: Segiempat tepat

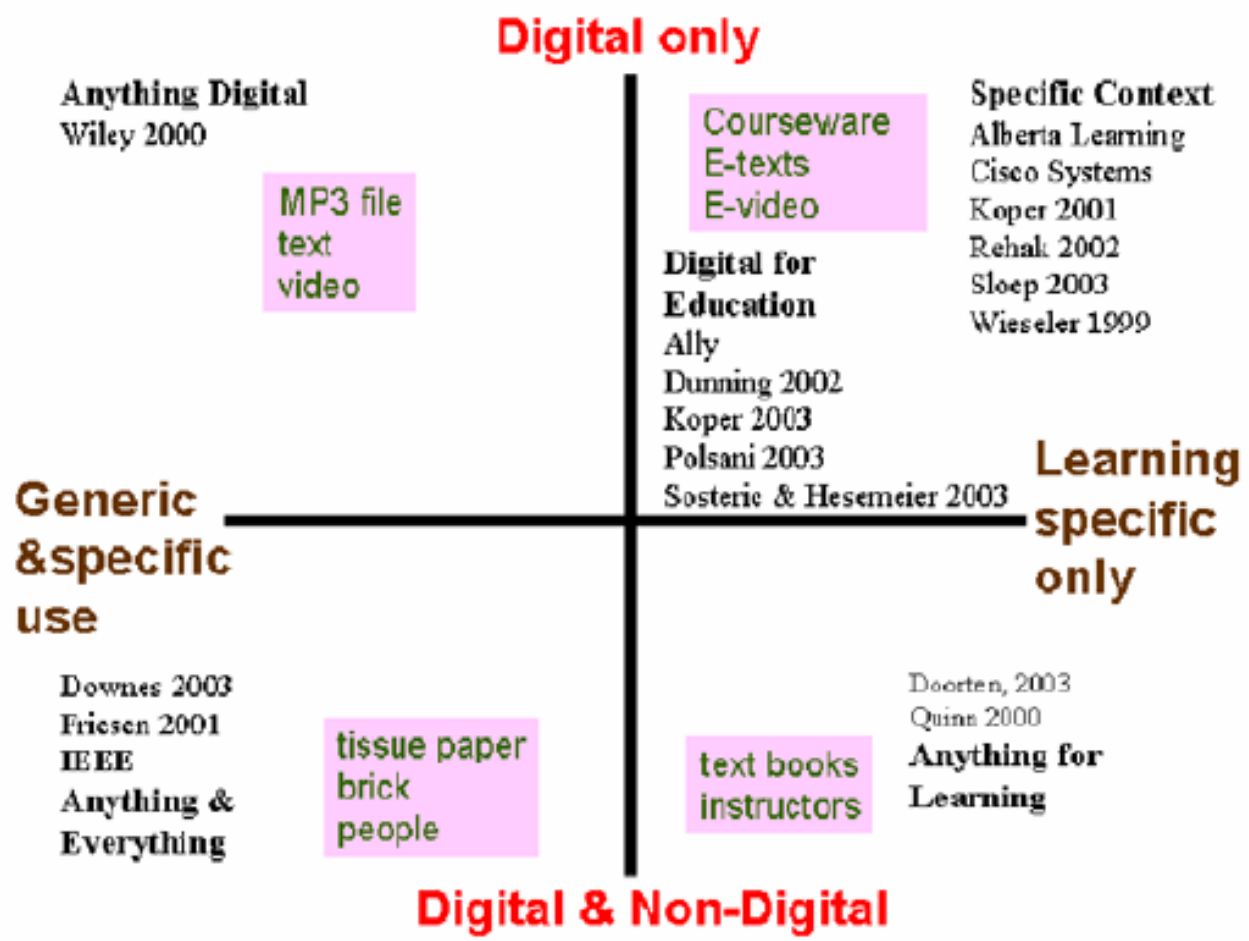


Digital Learning Objects (DLO)

- Why digital learning objects?
- What is its significance ?
  - Can help students to understand, to see something abstract concepts in a more clear and meaningful
  - Examples of abstract concepts: How computer circuits work , the flow of electrical current , the movement of molecules and so forth

Digital Learning Objects (DLO)

- How digital learning objects are used?



Digital Learning Objects (DLO)

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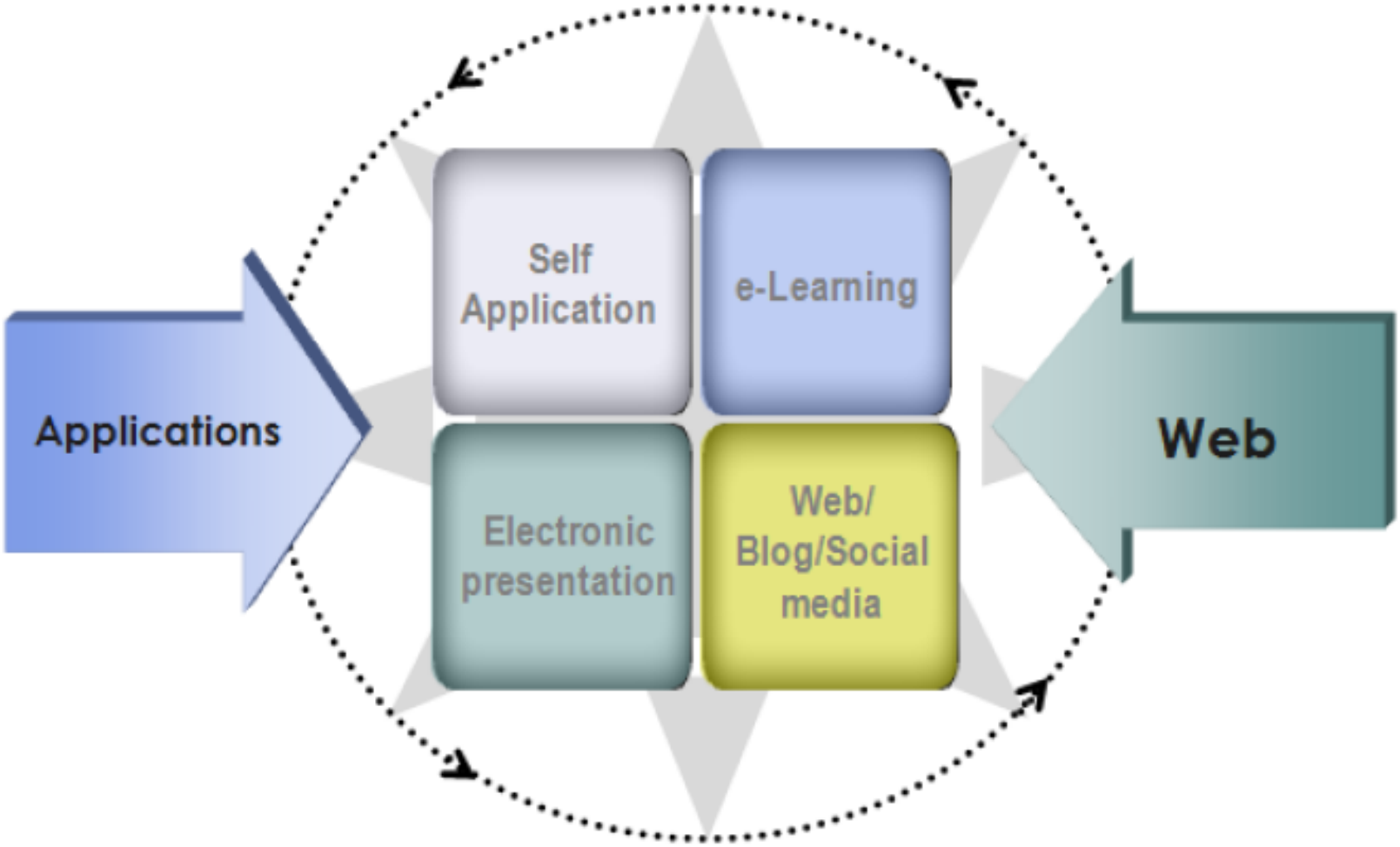

Digital Learning Objects (DLO)

continued

- Guide on how to develop DLOs?
  - Set prior learning objectives
  - Make sure that the content of DLOs coincide with the learning objectives that have been set
  - For the DLOs in the form of training or simulation, make sure you know how to use it first
  - Make sure that you know how to help students use the DLOs

Digital Learning Objects (DLO)

continued

- Choosing DLOs concept?
  - What topics / concepts that fit the intended DLOs?
  - Is the topic of difficult to be learned by your students?
  - What is the problems to be solved ?
  - What difficult concept to be taught in your existing teaching?
  - What is the most interesting concept of the subject?

Thank you