LINKING LEARNING AND RESEARCH CONFERENCE 2007

Linking learning & research: illustrating examples of the integration of connection learning within Sports & Exercise Science

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Connection learning: A framework for the development of teaching

Aims:

1. Introduce Connection Learning
2. Identify examples of connection within the Sport and Exercise Science programme
3. Discuss of other types of connections in different subject areas

Learning & Understanding

Understanding / Critical thinking / Deep approach to learning

But how can these be achieved?

- Mechanics of 'deep' learning
  '…I was looking for the argument and what ever points were used to illustrate it. I could not avoid relating the article to other things, I'd read, past experience, and associations, etc…' (Marton and Säljö, 1984: 41)
- Principles for effective learning
  'Learning is fundamentally about making connections through neural networks, mentally among concepts and ideas, and experientially through interaction between the mind and environment' (AAHE, 1998: 3)

Reference to 'Connection Learning'

Biggs (1996) At the most complete level (SOLO Taxonomy) the student is making **connections** not only within the given subject area, but also beyond it.

Entwistle (1998) Understanding is achieved when 'knowledge objects' are re-structured by the student. This requires **connections** between ideas, and evidence to be explored.

Palmer (1998) Good teachers weave a complex web of **connections** among themselves, their subjects, and their students.

Entwislte (2000) If the teacher fails to relate either to prior knowledge or informal experience, compartmentalisation is a likely consequence. A more sophisticated set of conceptions regarding learning, knowing and teaching has the potential to draw the students' attention to **connections** with other areas of knowledge and skill

Hounsell & McCune (2002) Certain forms of understanding which seem to go beyond these fundamentals require application, ***interconnections***, and apprehending their derivation.

Shulman (2004) A teacher must **connect** with what students already know and come up with a set of pedagogical representations…that will **connect** with those prior understanding…and help the students to create their own representations to replace them

Connection Learning

- **Types of connections**

  Connections need to be made between current learning material / activities and;

  1.Learning outcomes and assessment
  2.Skills, attitudes and personal attributes
  3.Past experiences
  4.Practice
  5.Additional activities/tasks
  6.The programme
  7.Future activity

So what's new?

1. Make it explicit & question your assumptions
   Do students see connections that we take for granted?
   SPSS
2. Student focussed approach to teaching
   Therefore teachers seeing connections and telling the students they exist (information transmission) will not enhance learning but creating conditions for students to construct them for themselves (conceptual change) will
3. Re-conceptualisation of SOL
   '3 shades of blue'

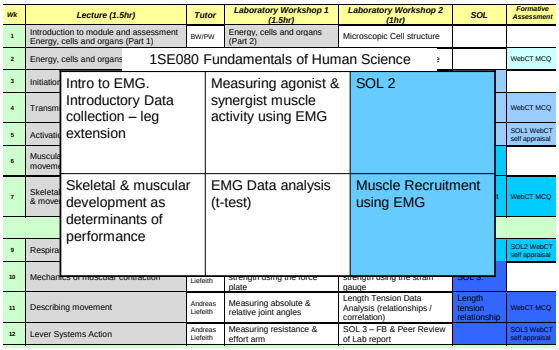
Rationale for Connections within SES

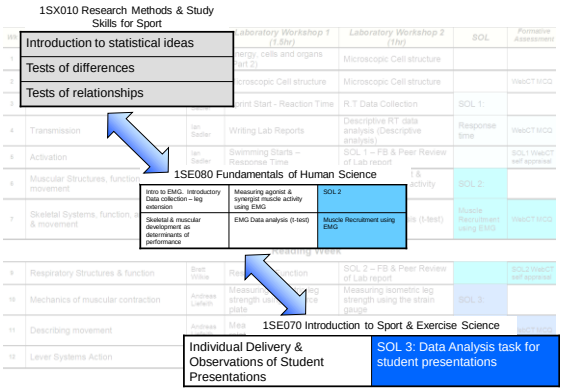
Aims

1. Increased achievement
2. School – University transition
3. Intra-module knowledge transfer

Strategies

- Integration of theory of connection learning
- SOL consistency (‘3 shades of blue’)
- Increase contact





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links created across modules are based on one of several connections

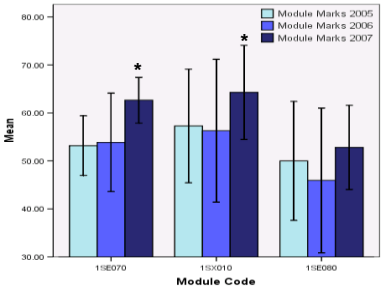
Quantitative Analysis

Semester Mean

2004-05 = 53%

2005-06 = 53%

2006-07 = 60%



* **Significantly different from 2005 & 2006 (p<0.01)**

Subject specific discussion

1. Where do you think connections already exist in your programme
2. Have you any evidence that the students see these connections
3. What potential is there to make more connections or make the existing ones more explicit