Pedagogy, practices and language as a social semiotic – a Thinking Writing/LASS approach to integration

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Thinking Writing
Learning Development
Queen Mary University of London
Outline of our talk:

Thinking Writing: ethos and approaches
Pedagogy and practices: research-based learning, a case study
Language as a social semiotic
Concluding thoughts
Thinking Writing, an ethos

1. Writing is used as a pedagogical device to learn disciplinary content, thinking, concepts and discourse

2. Learning to write does not equate to learning to write essays

3. Students’ writing is not a (or their) problem but is ‘usefully problematic’ (Mitchell and Evison, 2006)
Research-Based Learning and Writing

What if students were in charge and responsible for generating new disciplinary knowledge? What happens?
Global Change Biology, a case study

GCB is a 2nd year subject in the School of Biological and Chemical Sciences about:

- the biological consequences of climate change
- land use change
- pollution and biodiversity loss

22 hrs of lectures and 12 hrs of labs.
Outline of Practical Classes on Global Change Biology Course

An overview of the scientific process:

- an introduction to hypothesis testing and experimental design
- carrying out an original experiment
- an overview of basic statistics
- writing up the experiment
- group presentations
- peer review
- and “publication”
Peer review of intros and methods

Questions for guiding peer review:

1. Has the writer given a concise overview of the broad issues this area of research addresses? What does he or she see as the broad issues?

2. How has the writer organised his or her review of the literature? Has he or she dealt with one research article at a time or picked themes across papers to explore?

3. How easy is it to follow the writer’s line of thought in this section? Is there anything you would change, move around, or expand on to improve it? Please be specific.
Subject evaluation

Standard module survey: satisfaction ranged from 78% in 2012 to 84% in 2014

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of students</th>
<th>Peer review improvement</th>
<th>Final report</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>27</td>
<td>4.5 ± 5.8%</td>
<td>62.6 ± 7.4%</td>
</tr>
<tr>
<td>2013</td>
<td>33</td>
<td>13.7 ± 14%</td>
<td>63.7 ± 10.8%</td>
</tr>
<tr>
<td>2014</td>
<td>39</td>
<td>18.0 ± 18.4%</td>
<td>65.7 ± 6.5%</td>
</tr>
</tbody>
</table>
A Language as Social Semiotic (LASS) approach to teaching-learning in HE
Presenting a LASS approach

1. The threshold concept: *Language makes meaning*
2. Illustrate dimensions of a LASS approach
3. QMUL Operating Systems lesson
4. Discussion/questions
Language organizes and gives meaning to our experience.

<table>
<thead>
<tr>
<th>Participant (noun grp)</th>
<th>Process (verb grp)</th>
<th>Circumstance (prepositional grp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A fish</td>
<td>is swimming</td>
<td>through the water</td>
</tr>
<tr>
<td>Subject</td>
<td>Verb</td>
<td>Adverbial</td>
</tr>
</tbody>
</table>
Language - central to how we construe our phenomenal world

experience → language → meaning → experience
| Contextualised commonsense | A fish is swimming through the water |
Fish that swim upstream in rivers to spawn ...

Contextualised commonsense

A fish is swimming through the water
Fish that swim upstream in rivers to spawn ...

A fish is swimming through the water

...must navigate complex fluvial velocity fields to arrive at their ultimate locations ...
Decontextualised uncommonsense

...The energy expenditure cost of the migration pathway of this telemetrically tracked pallid sturgeon (*Scaphirhynchus albus*) is lower than $10^5$ random paths through the surveyed reach and is consistent with the optimization hypothesis.

...must navigate complex fluvial velocity fields to arrive at their ultimate locations ...

Fish that swim upstream in rivers to spawn ...

Contextualised commonsense

A fish is swimming through the water
The energy expenditure cost of the migration pathway of this telemetrically tracked pallid sturgeon *(Scaphirhynchus albus)* is lower than $10^5$ random paths through the surveyed reach and consistent with the optimization hypothesis.

**Participant (noun group)**

**Process**

**Participant (adjective group)**
Uncommonsense conceptual formation

The energy expenditure cost

the migration pathway

telemetrically tracked pallid sturgeon

FISH MIGRATION

Scaphir hynchus albus

the surveyed reach

the optimization hypothesis
Key dimensions of a LASS Approach
Key dimensions of a LASS Approach

- Analysis of disciplinary meaning making
- Research
  - Teaching-learning
Meaning making in Health and Social Care: A genre perspective
Meaning making in Health and Social Care: A genre perspective

to narrate

classify and describe

explain

argue
Meaning making in Health and Social Care: A genre perspective

- to narrate
  - case study recount
- classify and describe
  - classification/taxonomic report genre
  - description genre
- explain
  - factorial/consequential explanation
  - theoretical explanation
  - problem-solution explanation
- argue
  - hortatory
  - analytical
  - argument
  - discussion
  - challenge
Meaning making in HSC: a lexicogrammar perspective

Extract from Eva’s text

These effects of social exclusion are interlinked and can lead to a physical sense of exclusion where people are drawn to live in the margin of their community. ... In the case study explained in the course text we have analysed the situation of Simon, a young man who is socially excluded by his community
These effects of social exclusion are interlinked.

Process Participant can lead to a physical sense of exclusion
where people are drawn to live in the margin of their community.

Process Participant
In the case study explained in the course text

Circumstance

we have analysed the situation [of Simon, a young man [[who is socially excluded by his community]]]

Part’pant Process Participant
The meaning-making trajectory

Narrate  
Classify and Describe  
Explain  
Argue

More material/categorical
More conceptual/perspectival
Key dimensions of a LASS Approach

- Semantic Orientation
- Analysis of disciplinary meaning making
- Research
- Teaching-learning
Sports and Fitness Management Assignment Task (UG – 1\textsuperscript{st} year)

• Select two activities and explain whether you consider these activities to be sport, recreation or physical activity, and give reasons to justify your choice. (500 words/35 marks)
Beatrice

Green (2008) describes four characteristics of sport that distinguish it from recreational activities. The first is a physical dimension which both canoeing and ballet involve as discussed above. Secondly there should normally be a competitive element involved. Canoeing can be competitive and is included within the Olympics in two forms, the canoe slalom and canoe sprint. Ballet is not generally a competitive activity. Professional ballet dancers belong to a ballet company and earn through performance rather than through competition...
Firstly I’ll start with football. This is a sport which is very much hard to define. It is played at so many different levels, by so many different people of all ages and fitness levels. On the one hand it is played at a professional level every week by premiership and league players. They have very high levels of fitness and stamina, because this is their weekly job, just as you or I would work in a bank etc. To quote the study guide “there must be some physical dimension involved, e.g. running, jumping, throwing “. Seen in this dimension football, in my opinion would be classed as a sport.
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Different linguistic patterns

- Andrew’s essay – (40%)
- Beatrice’s essay – (85%)
Why different?
The meaning-making trajectory

Narrate

Classify and Describe

Explain

Argue

More material/categorical

More conceptual/perspectival
Key dimensions of a LASS Approach

- Semiotic Mediation
- Semantic Orientation
- Analysis of disciplinary meaning making
- Research
- Teaching-learning
- Research
- Teaching-learning
- Research
- Teaching-learning
Semiotic Mediation: the process of scaffolding uncommonsense meaning

Reconfiguring the learner’s conceptual formation

Teacher

Learner

external semiotic mediation
Semiotic Mediation: key types

Semiotic mediation

- reading, listening to, and producing academic discourse
- modelling/guidance + scaffolding
- metasemiotic mediation
Metasemiotic mediation: A revision session in a second year Operating Systems subject at QMUL
2015, Q1 (d)

d. Give brief answers to the following questions:

i. What is a ‘system call’? Your answer should include an example (the exact name is not required).

ii. ...

iii. ...

[8 marks]
Student A

A system call is a request made by a process to the operating system in order to perform tasks only the operating system can complete. Retrieving a file from a disk, or retrieving/displaying inputs/outputs, are examples.

Student B

System call is a trap, is for OS to have a library to store all the frequently used methods.
A **system call** is a **request** made by a process to the **operating system** in order to perform **tasks** only the operating system can complete. **Retrieving a file from a disk, or retrieving/displaying inputs/outputs**, are examples of this.
Question: What is a ‘system call’? Your answer should include an example (the exact name is not required).

Candidate 2: A system call is a request made by a process to the operating system in order to perform tasks only the operating system can complete. Retrieving a file from a disk, or retrieving/displaying inputs/outputs, are examples of this. GOOD

Candidate 4: System call is a trap, is for OS to have a library to store all the frequently used methods SOME MERIT

Candidate 5: System call is user using terminal to make system modifications and gather information about system. Like changing access information for folder using chmod command in Linux POOR
What Makes a Good Answer

1. The question: reading and answering the question
2. Concepts: correct concepts, and relationships
3. Clarity: writing clearly
4. Length: as concise as possible
Candidate 2: A system call is a request made by a process to the operating system in order to perform tasks only the operating system can complete. Retrieving a file from a disk, or retrieving/displaying inputs/outputs, are examples of this.

Suggested template:
A system call is …
An example of a system call is: …
Exercise: Reading The Question

• How much of the following answer is relevant?

  – Ignoring whether it is correct!

Candidate 3:
1. A system call is called by the Operating System.
2. Whenever a programme run from the user mode crashes or it has been programmed badly and does not stop running, …
3. the operating system can intervene and kill that process to prevent it from inflicting any damage to the system.
4. Example would be Ctrl+c
Exercise: Related Concepts

- Create three columns and assign the following concepts (or others) related to ‘System Call’

<table>
<thead>
<tr>
<th>Most Related</th>
<th>Somewhat Related</th>
<th>Little Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trap</td>
<td>Function call</td>
<td></td>
</tr>
<tr>
<td>Mode switch</td>
<td>Reading a file</td>
<td></td>
</tr>
<tr>
<td>Processes</td>
<td>Interrupt</td>
<td></td>
</tr>
<tr>
<td>User program</td>
<td>Context switch</td>
<td></td>
</tr>
<tr>
<td>Creating a process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disk</td>
<td>Memory</td>
<td></td>
</tr>
<tr>
<td></td>
<td>User</td>
<td></td>
</tr>
</tbody>
</table>
Exercise: How are Concepts Related?

• Complete the sentences

1. A system call is part of the OS’s __________
2. A system call is used in a ________________
3. A system call is implemented using a __________
4. A system call causes a ___________ and may also cause a __________
5. A system call appears in my program as a ________________

• Using
  – Trap, Function call, Mode Switch, Interface, Application program, Context Switch
Exercise: How are Concepts Related?

• Complete the sentences

1. A system call is part of the OS’s interface
2. A system call is used in an application programme
3. A system call is implemented using a trap
4. A system call causes a ________ and may also cause a ________
5. A system call appears in my program as a __________________

• Using
  – Trap, Function call, Mode Switch, Interface, Application program, Context Switch
System Call

- Accesses the OS using
  - Function call
- Looks like
- Is implemented using
  - Trap
  - Mode switch
- May cause
  - Context system

- Is an example of a
  - Process create - fork
  - File access - read
  - Program execution - exec
System Call

- Process create - fork
- File access - read
- Program execution - exec

- Application Program
  - Accesses the OS using
    - Function call
      - Looks like
        - Process/Circ...
          - is implemented using
            - Trap
              - May cause
                - Context System
                  - Participant
                  - Process
                  - Participant
                  - Mode Switch

... umstance
Key dimensions of a LASS Approach

- Research
- Teaching-learning

Semiotic Mediation

Institutional awareness and action

- Policy, curriculum and assessment design

Semantic Orientation

Analysis of disciplinary meaning making

- Research
- Teaching-learning
Thank you!

For more information:
LASS approach ...


Thinking Writing...


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