Expanding Notions of Literacy

Multiliteracies: Meaning Making and Literacy Learning in the Era of Digital Text

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Preliminaries: A quick overview of the theory … then …

Five Transformations

1. The Means of Production of Meaning
2. The Forms of Classroom Discourse
3. The Social Relations of Text and Learning
4. The Texts of the Classroom
5. Assessment of Learning and Literacies
The term “Multiliteracies” refers to two major aspects of language use today.

The first is the variability of meaning making in different cultural, social or domain-specific contexts.

The second is the multimodality of meaning making, particularly evident today in digital information and communications media.
Synesthesia

- Oral Meanings
- Written Meanings
- Visual Meanings
- Spatial Meanings
- Tactile Meanings
- Gestural Meanings
- Audio Meanings
- Synesthesia
Literate Agents and Their Differences
Pedagogy

- situated practice
- overt instruction
- transformed practice
- critical framing

- experiencing
  - the known
- conceptualising
  - by naming
  - with theory
- analysing
  - functionally
  - critically
- applying
  - creatively
  - appropriately
Five Transformations

1. The Means of Production of Meaning
2. The Forms of Classroom Discourse
3. The Social Relations of Text and Learning
4. The Texts of the Classroom
5. Assessment of Learning and Literacies
Transformation 1. The Means of Production of Meaning

privileging the alphabet

starting at school...
c) Acquire the Data

To acquire the data of motion track and velocities, the software used in this experiment is called “Tracker 4.87”, which is downloaded from the website: https://www.cabrillo.edu/~dbrown/tracker/

After setting the coordinates and calibrating the length, users can use mouse to track the motion of desired object frame by frame. Then, Tracker will return a series of position data \((x, y)\) and velocity data \((v_x, v_y)\) in a table.

Below is the acquired data from 30 videos in total.

Experiment_30Data.xlsx
"Hands up!"

Transformation 2. The Forms of Classroom Discourse

(Cazden, 2001)

Teacher initiates: ‘What’s the furthest planet from the sun in the Solar System?’

Students respond: (Members of the class shoot up their hands, and one responds, a proxy for all the others) ‘Pluto.’

Teacher evaluates: ‘Yes, that’s correct!’ (Or an alternative ending: ‘No, that’s wrong, does someone else know the answer?’)
6. Analyzing Language
Classroom Discourse (still ... and utterly transformed)

1. Everyone responds

2. Lowered barriers to response

3. From oral and written

4. When everyone responds, learner differences become visible and valuable

5. This is highly engaging

6. The read/write mix and the participation mix is about right

7. We can break out of the four walls of the classroom and the cells of the timetable

8. Anyone can be an initiator

9. A new transparency, learning analytics and assessment
References
Transformation 3. The Social Relations of Text and Learning
Clinical Evaluation of Hank the Beagle

Hank is a 2 year-old, MC Beagle who was presented to the U of I Cardiology Service for an episode of...
COGNITION

**Learning Activity**: a focus on representation of specific content knowledge

**Disciplinary Practice**: thinking about a specific topic, its facts and arguments

**Empirical Work**: outlining specific content, applying disciplinary reasoning to that content

**Individual Intelligence**: the activity of representing knowledge (including contribution to jointly created works)

**Learning**: the knowledge representation made by the student

METACOGNITION

**Self-regulation of Learning**: project objectives, phase outline; ongoing dialogue around processes

**Disciplinary Thinking**: a focus on the general conditions of insightful work in this discipline; epistemological reflection

**Theoretical Work**: thinking based on the general theoretical precepts of the discipline; a play/dialogue between the particular (thinking about specific details of knowledge), and the general (thinking about conceptual concepts and frameworks that tie this knowledge together).

**Collaborative Intelligence**: structured feedback; productive diversity in learning from varied perspectives

**Assessment**: formative assessments by peers, teachers and self; retrospective data analytics
What do we do about Pedagogy ....?
Transformation 4. The Texts of the Classroom

Petrus Ramus, *Euclid's Elements* (1569, English Translation 1636)
Health Technology Innovation with Limited Resources

Title: Health Technology Innovation with Limited Resources
Author(s): Jerry Amsa, William Cope, Mariam Bonyadi, Samson Honya
Collection: Higher Education Modules
Keywords: Communicable, Global health

Abstract
This learning module is an introduction to health systems in the context of disease burden and infrastructure to support health needs, with its emphasis on defining needs of a community, use of locally available materials, low-tech but game-changing innovations, sustainability concerns in resource-limited settings, and involving stakeholders and engaging the community within the context of healthcare systems and technologies, water and food sanitation, and local engineering strategies. Students will discuss ethical, social, and political concerns as part of the design process.
Learners as Knowledge Producers

Changing the Balance of Agency

Productive Diversity
Transformation 5. Assessment of Learning and Literacies
Embedded Learning Analytics:
– to end the strange textual and social practices of assessment?
– to end the distinction between instruction and assessment?
**Reference**

**Big Data Comes to School: Implications for Learning, Assessment, and Research**

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The prospect of “big data” at once evokes optimistic views of an information-rich future and concerns about surveillance that adversely impacts our personal and private lives. This overview article explores the implications of big data in education, focusing by way of example on data generated by student writing. We have chosen writing because it presents particular complexities, highlighting the range of processes for collecting and interpreting evidence of learning in the era of computer-mediated instruction and assessment as well as the challenges. Writing is significant not only because it is central to the core subject area of literacy; it is also an ideal medium for the representation of deep disciplinary knowledge across a number of subject areas. After defining what big data entails in education, we map emerging sources of evidence of learning that separately and together have the potential to generate unprecedented amounts of data: machine assessments, structured data embedded in learning, and unstructured data collected incidental to learning activity. Our case is that these emerging sources
What do we do about Assessment …?
... and in a wider perspective:

Didactic/Mimetic Pedagogy

Reflexive/Ergative Pedagogy
<table>
<thead>
<tr>
<th>Didactic/Mimetic</th>
<th>Reflexive/Ergative</th>
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</thead>
<tbody>
<tr>
<td>Teacher-centered</td>
<td>Learner as agent, participant</td>
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<tr>
<td>Learner as knowledge consumer</td>
<td>Learner as knowledge producer</td>
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<tr>
<td>Knowledge transmission and replication</td>
<td>Knowledge as discoverable, navigation, critical discernment</td>
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<tr>
<td>Long term memory</td>
<td>Devices as “cognitive prostheses”—social memory and immediate calculation</td>
</tr>
<tr>
<td>Knowledge as fact, correctly executable theorem, definition</td>
<td>Knowledge as judgment, argumentation, reasoning</td>
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<tr>
<td>Cognitive focus</td>
<td>Focus on knowledge representations, “works” (ergative)</td>
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<tr>
<td>Individual minds</td>
<td>Social, dialogical minds</td>
</tr>
<tr>
<td>Long cycle feedback, retrospective and judgmental (summative assessment)</td>
<td>Short cycle feedback, prospective and constructive (reflexivity, recursive feedback, formative assessment)</td>
</tr>
</tbody>
</table>
Reference