Stories of Becoming: New Research on Building Systems Literacy

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Workshop Description

What does it mean to be literate in complex systems? Bill Green's model of *Literacy in 3D* challenges us to consider subject-specific literacies in terms of three dimensions: the cultural, operational, and critical. In this session, we'll discuss key findings from new research on what it means to be culturally, operationally, and critically literate in systems across a wide range of disciplines, and we'll explore patterns of experience among people who have developed high levels of such literacy themselves. Together, we'll consider our own stories of becoming systems literate and how this new research may inform our work in education.

Presenter

Caitlin Steele (stepping into a new role as Director of Teaching and Learning for Addison Central School District in Middlebury, Vermont) just completed a Ph.D. in Educational Leadership and Policy Studies at the University of Vermont. Her dissertation was titled *Education in the Age of Complexity: Building Systems Literacy*. She is excited to share a few highlights from her research, receive feedback from the CLE community, and begin to explore implications of this work in the context of education practice.

Target Audience

This workshop assumes no particular level of expertise in systems thinking or dynamic modeling. It is designed for novices and experts alike (and together!) to consider what it means to grapple with complexity across a range of contexts.

The Literacy in 3D Model

In the *Literacy in 3D model*, Bill Green defined subject-specific literacy as “the particular literacy . . . that is inextricably part of the operation of a specific subject area.” The model emphasizes *production* over *consumption* of knowledge. It identifies *thinking* and *meaning* as “the real ‘basics’” of literacy. And it defines literacy across three overlapping dimensions: the cultural, operational, and critical.
### The Literacy in 3D Model (cont.)

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<th>Cultural Dimension</th>
<th>Operational Dimension</th>
<th>Critical Dimension</th>
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<td><strong>Connects to</strong></td>
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<td>Power</td>
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<td>• terms and conventions</td>
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<td>• the socially constructed nature of knowledge</td>
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<td><strong>Provides</strong></td>
<td>Access to the meaning system of a specific subject.</td>
<td>Potential to function effectively and productively within the culture of a subject.</td>
<td>Ability to transform and actively produce meaning and culture.</td>
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(Weight & Beavis, 2012)

### Session Overview

Through an upbeat presentation and conversation and a couple of targeted activities, we'll explore the following:

- Wallowing in illiteracy – a personal reflection on arriving at complexity.
- Systems, systems everywhere.
  - What is a system, anyway? (Theoretical underpinnings.)
- Overview of research.
  - Methods (in brief).
  - Systems literacy defined through the 3D model.
  - Patterns of becoming systems literate – grounding, questioning, broadening, integrating, and developing a systems lens.
- Implications, applications, incarnations, and adaptations. (Opportunities to explore So what?)

### References
