


Emergent Literacy: New Models of Learning & Teaching

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Simple versus Complex Theories


Even though a simpler theory may suffice for most children, I am certain that a view of complexity is the kind of understanding required to deliver results in an early intervention programme aiming to prevent subsequent literacy difficulties in as many children as possible.

COT, p. 138



Expert - Novice Differences

1. Expert notice features and meaningful patterns of information that are not noticed by novices.
2. Experts have acquired a great deal of content knowledge that is organized in ways that reflect a deep understanding of their subject matter.
3. Experts' knowledge cannot be reduced to sets of isolated facts, but instead reflects contexts of applicability.
4. Experts are able to flexibly retrieve important aspects of their knowledge with little attentional effort.
5. Experts have varying levels of flexibility in their approach to new situations.



Learning & Development

Most children respond to most teaching in active ways.... They operate on print as Piaget's children operated on problems, searching for relationships, and they find some order in the complexity of print.... *For such children the teaching sequence described below are unnecessary. Evaluations of instruction of many kinds show that many children can learn to read well in different classroom programmes.*

LL2, p. 101



Role of Observation

My emphasis on observing came from my work as a researcher rather than my work as a teacher.... If I were to adopt a neutral stance and observe exactly what children did, I would have to step out of a teaching role and become much more like a scientist setting up a situation and recording precisely what happened.

LL, p. 11



Microgenetic Analysis of Learning

1. Learning is basic to human existence in all periods of life, but is especially so in childhood.
2. Learning is central in changes that were once attributed entirely to maturation, such as beginning to reach, kicking, and stepping.
3. Childhood can be defined as the period of life in which learning is the primary goal.

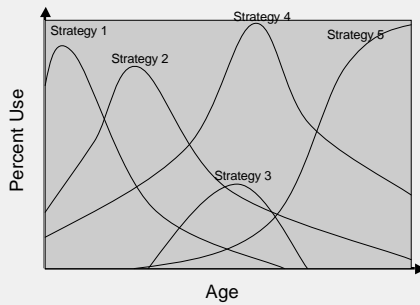
Siegler, 2006



Microgenetic Method

- Observations span the period of rapidly changing competence.
- Within this period, the density of observations is high, relative to the rate of change.
- Observations are analyzed intensively, with the goal of inferring the representations and processes that give rise to them.

Overlapping Wave Theory



Dimensions of Change

- Variability of change
- Path of change
- Rate of change
- Breadth of change
- Source of change

Variability of Change

- Individuals often think about or solve the same problem in different ways.
- The overall trend of learning is toward more advanced approaches, but many regressions occur along the way.
- Increase variability is related to subsequent learning.

Path of Change

- The development sequence construct was purposed to account for age related change, but qualitatively distinct approaches are observed in learning experiments over much shorter times.
- Learning experiments have shown both common and different paths to advanced performance.

Rate of Change

- Gradual vs. Rapid
- Rate of Discovery vs. Rate of Uptake
- In many experiments the Rate of Uptake is slow
 - Older children tend to show faster uptake
 - New strategies that offer larger advantages in accuracy show faster uptake than new strategies that have smaller advantages.

Breadth of Change

- Transfer to new situations can be a challenge -- learning is broader than the exact context in which the new approach was learned, but narrower than the full set of contexts where it could be useful (and not others).
- Breadth of learning tend to be greater when the approach:
 - Yields dramatic improvement in accuracy
 - When the new approach is applicable to all problems presented rather than only some problems.



Source of Change

- Feedback generally promotes learning more than solving problems in the absence of feedback.
- Self-explanation supports learning on a number of tasks
 - Explaining both why correct answers are correct and why incorrect answers are incorrect seemed to improve learning
 - Explanation increased breadth of learning.
- Self-explanation may increase depth of processing or weaken use of flawed strategies



Brain Function

It is false to assume that a central processing system for literacy already exists in the brain when the child begins literacy learning. While learning the items we are teaching, the child is building a processing network that will deal with literacy tasks. He needs to learn the letters and the words, and their relationships to sounds, but he also has to build and expand the intricate interacting systems in the brain that must work together at great speed as he reads text.

LL2, p. 102