Transfer of Writing Skills

[adapted from Ambrose et. al., *How Learning Works* (2012); Fitzgerald, “The Problem of Transfer” (March 2013); and O’Malley “Understanding Transfer” (2009)]

Definitions of Transfer

- when learning in one context enhances (or undermines) a related performance in another context. (Perkins and Salomon, 1992)
- the ability to extend what has been learned in one context to new contexts (Brandsford, Brown, Cocking, 1999)
- the process of using knowledge or skills acquired in one context in a new or varied context. (Alexander and Murphy, 1992)

Wardle (2007) also reviews classic conceptions of transfer:

- Task-centered -- knowledge required to complete a task
- Individual -- “learned intelligent behavior” and “disposition”(Tuomi-Grohn and Engestrom 24).
- Contextual --
  - Situated: “patterns of participatory processes across situations” (Tuomi-Grohn and Engestrom 25).
  - Sociocultural: “relations between persons and activities” Activity-based: “…the individual’s learning is understandable only understand the learning of the activity
system” (30). “learning” or “generalization” (Beach 40)

- Activity-based perspectives approach transfer in structural and systemic turns. “David Guile and Michael Young adopt this same language, arguing that we must “reformulate transfer as a process of transition between activity systems” (77).

**Types of Transfer**

- Positive transfer - when learning in one context enhances a related performance in another context.
- Negative Transfer - when learning in one context undermines a related performance in another context.
- Near transfer - transfer between very similar but not identical contexts.
- Far transfer - transfer between contexts that, on appearance, seem remote and alien to one another. Applying learning to situations that are quite dissimilar to the original learning.
- Low road transfer (a.k.a. reflexive transfer) involves the triggering of well-practiced routines by stimulus conditions similar to those in the learning context.
- High road transfer (a.k.a. mindful transfer) involves deliberate effortful abstraction and a search for connections.
- Forward reaching transfer (a form of "high road" transfer) – one learns something and abstracts it in preparation for application elsewhere.
- Backward reaching transfer (a form of "high road" transfer) – one finds oneself in a problem situation, abstracts key characteristics from the situation, and reaches backward into one's experience for matches.

**Transfer Depends on Metacognition...**

Effective learning depends on thinking beyond the particular situation in which something was learned by a “process of reflecting on and directing one’s own thinking” (National Research Council, 2001, p. 78).

... and Motivation Effective Learning Depends on establishing both value and expectancies

Value: attainment vs. intrinsic vs. instrumental

Expectancies: outcome and efficacy (Ambrose et. al., 2012)
Prior Knowledge Can Function in Three ways.

1. An individual’s prior knowledge can match the demands of a new task;
2. An individual’s prior knowledge might be a bad match;
3. An individual’s prior knowledge might be at odds with a given situation.

A Typology of Prior Knowledge

• Assemblage: grafting new knowledge onto old in the form of isolated bits
• *Remix*: integrating new knowledge into the schema of the old
• *Critical Incidents*: episodes that demand rethinking of prior knowledge in light of what went wrong

The assumption in many situations is that prior knowledge and motivation can get us to, and through, a new learning situation in a process of accretion. But this is not often the case. Our prior knowledge is limited in application or even plain wrong. We have to see things in a new way.

Why Might Transfer Fail?

• The student did not learn what he or she was supposed to learn initially. A few investigators admitted being caught off guard when this explanation unfolded. The point - students can't transfer what they have not learned.

• The student’s initial learning was deep and thorough but instruction did not delve into when that learning might be used, applied etc.

• The initial learning occurred in a single context.

• The transfer that one hoped for required more than a transfer of prior learning; it required genuine creativity.

• The focus of instruction involved knowledge that was fundamentally "inert," "passive," "local," or "context bound." The material that was so peculiar to the initial learning that it really does not transfer, at least to the novel task or problem that confronts the student. (Perkins and Salomon, 1988)

• The similarities between the initial learning and the novel task were barely discernible. The transfer was too "far" removed from the initial learning or the perceptions of students. Sometimes, "learners do not see that two or more situations or conditions are similar."
(Simons, 1999)

- The investigator or instructor looked for the transfer too quickly. This explanation emerges from the proposition that transfer "enhances" learning i.e. narrows the time that it takes to complete/solve a novel and subsequent task or problem.

- The efforts to promote transfer were not explicit, systematic, or persistent.

- The culture of schooling taught students that there is only one legitimate way to solve a class of problems. (Hatano and Greeno, 1999)

- Traditional conceptualizations of transfer are "impoverished." Learning involves more than a "deployment" of an initial learning. (Carraher and Schliemann, 2002) In other words, learning does not carry over intact or directly from one situation to another. The initial learning has to be adapted (assimilated, accommodated) before the novel problem can be solved.

- The transfer of knowledge cannot occur because knowledge cannot be decontextualized. (Lave, 1988)

**The "Bo Peep Theory" of Transfer:**

Little Bo Peep has lost her sheep
And can't tell where to find them.
Leave them alone, And they'll come home,
Wagging their tails behind them

The "Bo Peep Theory" of Transfer (Perkins and Salomon, 1988) suggests that the approach to transfer in many educational settings is similar to Bo Peep's approach to getting her sheep back. Bo believes that the sheep will return home with no intervention on her part. Educators, some suggest, treat transfer as if it will take care of itself. But, it does not.