Agency Drives Growth:

Adapting Students and Evolving Institutions

James Hardaway

College of Education, NC State University

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Dr. McKeown

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My journey to understand knowledge, learning theories, and how those influence instruction has taken quite a few turns over the past four months. The lessons in this course presented opportunities to explore my own thoughts, feelings, and biases on how teachers affect the relationship between their students and the institution of education. Beyond teaching students how to understand the world around them, educators shape individual trajectories by reinforcing scholarship as a lifelong adventure most often occurring outside the traditional classroom. This paper reflects how my views on instruction shifted from focusing on learning capability to a more systems perspective of how learners grow as their environment changes. This modification, informed by Schott and Driscoll's universal instructional theory (Driscoll, 2004, p. 353), will be described through the following model:

INPUTS → ENVIRONMENT → OUTCOME

↓	↓	↓
Learner/Task Assumptions	Principles/ Conditions	Learning Objectives

As the students and learning tasks change, instructors can modify the learning environment to achieve a range of desired outcomes. The environment represents the learning context that includes how a person internalizes principles and the situations the teacher presents to reinforce new concepts.

I began my graduate program convinced educators should adapt their methods to the learner, personalizing content for how that student prefers to learn. While I remain an advocate for student-centric instruction, my thinking has expanded to include students as active participants that must also adapt and evolve as they learn. The catalyst for this shift was exploration of the multiple theories on cognition. Specifically, the concepts of **metacognition** (Driscoll, 2004, p. 107) and **reflexivity** (Driscoll, 2004, p. 401) changed how I view a learner's responsibility to become aware of how they learn and what impact that has on how receptive they are to unfamiliar concepts and challenges. If a student recognizes how they receive and process information, they are then able to critique and adapt their intake to include modalities that could increase learning potential. The **transfer** (Driscoll, 2004, p. 377) of knowledge from one context to another is essential to measuring whether any new cognitive potential has been achieved.

Assumptions: Getting Beyond Learning "Capability"

My belief that knowledge is constructed to enable learning remains as firm today as when I read Driscoll's opening chapter. While I may not have recognized the **interpretivist epistemic tradition** (Driscoll, 2004, p. 11), I arrived convinced that individuals think and reason to understand their environment, and this internal process creates a personalized view of reality. With **rationalism** and **idealism** driving my characterization of knowledge, I was logically inclined to accept the author's definition of learning (Driscoll, 2004, p. 9) as a process designed to change learners or at least how they interpret what's around them. What I was less clear on was how learning takes place. My initial assumptions centered on student capabilities driving instructors to adapt their teaching environment and methods to cater to those predispositions. Driscoll's treatment of cognition in its various forms reoriented my focus from individual

limitations towards a belief that greater learning outcomes are possible only when students' preferences are challenged.

Both situated and interactional cognition theories employ the variable of sociocultural context to emphasize that how people think is a product of their environment. Lemke believed there was little value in evaluating a student's ability without first understanding the communal factors affecting how knowledge is received (Driscoll, 2004, p. 158). This **knowledge as lived practices** is also seen in the research of Bruner (Driscoll, 2004, p. 242) and Vygotsky (Driscoll, 2004, p. 252) on how an individual's cultural environment impacts **internalization**. Their examples convinced me that the learning process involves much more than just how the brain functions innately, as implied by information processing and genetic cognition models. As a result, my assumptions evolved to reflect pieces of each of these cognitive models. While I believe that learners do progress through stages of cognitive development, the order of those stages may not always be sequential like Piaget claimed. These refined assumptions form the basis of an updated list of inputs for my theory of instruction. Situational context, learning history, and task complexity are a few of the variables that converge to shape how the brain changes and adapts to new knowledge.

Principles: Learning Networks Enable Discovery

As my list of learning assumptions grew over the past few months so did the principles informing my thoughts on instructional philosophy. My **constructionist** leanings only became more instantiated as I progressed through the Driscoll text. A foundational conclusion from constructionists is that learning how to think will pay much greater dividends over the long term than learning what to think. Likewise, understanding one's own cognition can lead to a wider range of positive learning outcomes than accumulating vast amounts of declarative knowledge. This thinking guided my initial design of a personal learning network as the core instructional typology that can assist learners in better seeing themselves as a prerequisite to expanding their minds (see Appendix, Figure 1).

My original theory rested on a personalized **learning community** model driven by student goals that were reinforced by what I saw at the time as the key actors having the greatest potential to influence learning: family, peers, and teachers. What I failed to include in the first iteration is how specific principles enable learning. Just being in a network does little to promote learning. Rather, the roles and responsibilities of each of the actors is key to influencing the learner's trajectory. Family reinforces foundational values and life skills that enable the social connections to other parts of the network while also creating cultural context. Peers provide the social feedback to get learners beyond a self-centered view of the world. Educators facilitate learning by helping students understand their strengths and challenges while introducing opportunities for **reflection** and **self-regulation**. Lastly, I recognize that the original model is limited in its application across the breadth of lifelong scholarship. To broaden the scope, I have added **communities of practice** as a fourth key actor (see Appendix, Figure 2). This addition introduces the **motivational** impact on students when they see applications beyond the classroom and connect with expert practitioners in the field. This serves to drive a learner towards thinking more critically as they see the purpose of their learning as solving real-world problems in their areas of interest.

Conditions: Inquiry through Problem-Based Learning

At the heart of my constructivist learning environment are conditions that promote self-awareness, collaboration, and ownership of educational goals. To grow in a direction that aligns with their values and interests, students must recognize and commit to their role in the process. I borrow heavily from Driscoll's treatment of learning conditions in Chapter 11 (Driscoll, 2004, p. 393-402), with my prioritization of effort as follows:

1. **Self-awareness** of knowledge construction. This reflexivity enables students to build and explore new learning constructs as they become comfortable with their internal learning mechanisms. Such skills are critical to transferring knowledge from simple to more complex applications.

2. **Ownership** in learning. Student-centric teaching in this model refers not just to the focus of the instructional methods, but also to the responsibility the learner has in managing how their learning needs will be met. This requires some trust on the part of the instructor and some students may not be as ready. In this case, instructional aides may be necessary to help guide students as opposed to letting them operate autonomously. Key is to acknowledge the learner as a key responsible party in the communal relationship.

3. **Complex, relevant** learning scenarios. Increasing problem complexity is another condition that reinforces knowledge transfer, while building self-confidence as learners gain understanding of new concepts. Real-world applications rarely present themselves in a way that matches classroom or laboratory examples. Adding realistic context allows students to experience multiple concepts converging in a single learning event. These events give teachers the opportunity to build upon previous learning through **scaffolding** and **anchoring** exercises as well.

4. **Multiple modalities** to challenge preferences. Viewing content through the lenses of different senses or multiple perspectives affords learners competing narratives about their subject matter. Not only will these alternative views reveal previously unseen aspects, but they present an opportunity to challenge or critique what they knew from singular representations. Questioning previous knowledge is a key step in maturing internalized learning techniques.

5. **Collaboration** to foster teamwork and communication. Solving problems in a team setting requires effective social skills to negotiate solutions. Rarely will a single student have all the answers, nor will the entire team agree on all paths to a final solution. These realities require learners to develop and leverage social capital, leadership skills, and bargaining. While helpful in the classroom, these talents are essential in the professional world.

Implications: Hyperconnected Learning

The theory on learning and instruction presented here could be applied in a variety of learning environments, though most students today learn using a mix of digital and analog

media, learning aids, and classrooms. Learning networks have the potential to grow exponentially fast and large in online environments. They can span from local to global rather quickly which brings both positive and negative aspects to shaping how students learn. While access to a much broader range of viewpoints works well for increasing social awareness and perspective, there is also the potential for a much larger array of inaccurate or illogical narratives that could dilute learning. A critical concept that could mitigate this risk is to increase the amount of digital literacy that is taught at every level of learning. I see digital literacy as the ability to discriminate between good and bad source material, especially when it comes to recognizing opinion and bias.

A positive aspect to global connectivity is that students can engage a large professional network much earlier in their learning journey than ever before. No longer must students wait until college to get internships in areas that interest them. Primary and secondary students can connect to professional communities to explore and contribute that may have been unheard of 20 years ago. This will allow students to focus much earlier on learning paths that could bypass traditional curricula in favor of highly specific studies. Schools should be willing to pursue alternative paths to high school diplomas, certifications, or degrees in favor of getting eager students into the workforce earlier if they desire.

In addition to learning in context, schools must get comfortable with offering the ability to assess in context. A way to explore complex problem solving and knowledge transfer is to use artificial and virtual reality or simulations to replicate environments too advanced or expensive to do in the classroom. Unfortunately, this technological capability will spotlight resource and budgeting shortfalls in at-risk communities. Similarly, the dependence on technology is becoming a critical dependency for lower income families as many can’t afford to connect to high-speed data paths at home, limiting the ability to augment what they’re doing in class.

This model present numerous pathways to expand how students can achieve their learning goals. What became clearer as the course progressed is that no single model should be applied to all learners all the time. Understanding where the student is in their learning trajectory should determine which strategies can be used most effectively for the individual. While I don’t see teachers maintaining the capacity to develop individual learning plans for every student, I believe technology can aid in closing the gap between what is taught and how it can be personalized to meet individual goals.

References

Driscoll, M. P. (2004). *Psychology of learning for instruction* (3rd ed.). Allyn and Bacon.

Appendix

Figure 1 – Original Learning Theory from Assignment 1

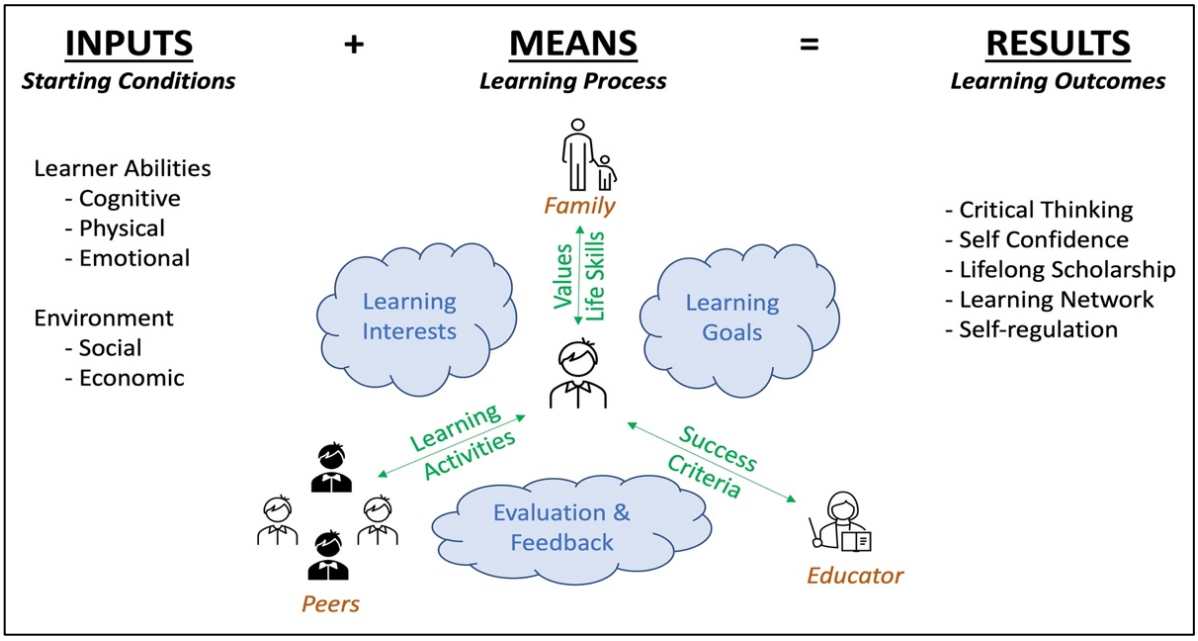

Figure 2 – Updated Theory