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*Adult learning takes place in context where tools and the context intersect with interaction among people.*

## Context-Based Adult Learning

*Catherine A. Hansman*

A few years ago, with a newly acquired master's degree in secondary education, I was hired by a midwestern university to teach writing to traditional and adult students in a university developmental writing program. My educational background as a musician and my work experience as a computer programmer had not prepared me to teach writing to adults. Colleagues hired with me also had diverse backgrounds; no one had ever taught writing in a university setting before. The problem became very apparent to all of us: How could we, in the week between when we were hired and when we were to start teaching, learn to be teachers of writing?

The university's solution to this problem was a required week-long series of English Department–sponsored workshops that incorporated lecture-style classes to indoctrinate us with the guidelines and rules that the English Department wished us to use to teach and grade papers. We heard talks from more accomplished writing teachers concerning their experiences, examined sample assignments and student written essays, and listened to recommendations from others about how to teach. In short, in a state of passive attentiveness and decreasing interest and awareness, we heard theories and abstract concepts about teaching writing. The obvious assumption by the planners of this workshop was that we would carry away knowledge about teaching writing from these workshops and apply it to our own classrooms. By the end of the week, we were, in the university's eyes, teachers of writing and ready to face a classroom of adult and traditional-aged university students.

But how did we really learn to be teachers? Our actual learning about teaching writing happened over time and was mediated by the experiences we had both in and out of writing classrooms. It was shaped by our interacting with students, discussing assignments and students with other

instructors, observing each other's classes, trying new assignments and ways of teaching, reflecting on our practice, and negotiating among the English department's and the university's rules and regulations. Along with our experiences in the classroom, the tools we used to teach (texts, computers, assignments) and the interactions with students, other writing teachers, and the administrators of the writing program at the university shaped our learning. Our authentic learning about teaching writing consisted of more than lectures about assignments and grading papers; it was in the unplanned intersection of people, culture, tools, and context.

My real-world experience of learning to teach writing is crucial to ideas of context-based adult learning. Indeed, adult education as a field has always valued learning from experience and collaboration. Dewey (1916) contends that "[t]he social environment . . . is truly educative in the effects in the degree in which an individual shares or participates in some conjoint activity. By doing his (sic) share in the associated activity, the individual appropriates the purpose which actuates it, becomes familiar with its methods and subject matters, acquires needed skills, and is saturated with its emotional spirit" (p. 26). In a similar fashion, Lindemann (1926) declares that "the approach to adult education will be via the route of situations, not subjects" (p. 6).

The ideas of the social context as central to learning have gained importance in discussions of learning in adulthood. Wilson (1993) argues that "learning is an everyday event that is social in nature because it occurs with other people; it is 'tool dependent' because the setting provides mechanisms (computers, maps, measuring cups) that aid, and more important, structure the cognitive process; and finally, it is the interaction with the setting itself in relation to its social and tool dependent nature that determines the learning" (p. 73). In other words, learning in context is paying attention to the interaction and intersection among people, tools, and context within a learning situation. More important, for adult educators who plan and teach, it is understanding how to plan and design programs for adult learners that will profoundly shape learning. And finally, it is incorporating the learners' developmental needs, ideas, and cultural context into the learning experience. This chapter will examine theories of learning in context in adulthood and discuss how these ideas can be used in adult learning situations.

## **Learning Outside the Mind**

From a historic viewpoint, behaviorist educational practices and psychological conceptions of learning have mirrored demands from business and industry to produce productive workers (Bonk and Kim, 1998). Behaviorism, punish-and-reward systems, and quantifiable methods of evaluation all contributed to a "factory model of learning" (Toffler, 1990). From this perspective, "knowledge is unchanging and transitive" (Brown and Duguid, 1996, p. 49), and once learned, is then easily transported from the particu-

lar learning situation to different contexts in which the knowledge can be put to work (Brown, Collins, and Duguid, 1989). Learning, then, is seen as something that happens inside the brain, separated from the experience and the context of the learning situation.

But as Merriam and Caffarella (1999) contend, “Adult learning does not occur in a vacuum” (p. 22). In contrast to psychological and behavioral understandings of learning, sociocultural models posit that learning is not something that happens, or is just inside the head, but instead is shaped by the context, culture, and tools in the learning situation. One of the earliest pioneers of sociocultural learning theory was twentieth-century Russian psychologist L. S. Vygotsky, who based his work on the concept that all human activities take place in a cultural context with many levels of interactions, shared beliefs, values, knowledge, skills, structured relationships, and symbol systems (Wertsch, del Rio, and Alvarez, 1995). These interactions and activities are mediated through the use of tools, either technical (machines, computers, calculators) or psychological (language, counting, writing, and strategies for learning), provided by the culture (Vygotsky, 1978, 1999). These tools ensure that linguistically created meanings have shared social meanings.

Vygotsky’s theories advanced an understanding and enhancement of how children learn and were essential to the development of other theories of learning in context. They provided a way to understand technical and psychological tools and how to use these them in practice. Many of his ideas have been incorporated into situated cognition as another theory of context-based learning.

### **Situating Learning: Understanding Situated Cognition**

The core idea in situated cognition is that learning is inherently social in nature. The nature of the interactions among learners, the tools they use within these interactions, the activity itself, and the social context in which the activity takes place shape learning. In her ethnographic study of how adults used math in real-world contexts such as grocery stores, Lave (1988) concluded that learning is a reoccurring process in which adults act and interact within their social situations. In her study, adults who were taught a “school” version of how to calculate mathematical problems were observed and interviewed concerning how they used the same type of mathematical equations in the real world of grocery store shopping. She found that the grocery items, coupons, and “in-store specials” themselves became tools for solving mathematical problems, while the grocery store and the social interactions with other shoppers or store workers were the social context for learning. Lave (1996) argues that it is not enough to “add situated contexts to learning experiences . . . a more promising alternative lies in treating relations among people, tools, activity as they are given in social practice” (p. 7). In other words, real-world

contexts, where there are social relationships and tools, make the best learning environments.

How is situated cognition similar yet different from other forms of experiential learning? Experiential learning emphasizes doing the task in order to learn it, and this “doing” may include self-directed learning activities. The learner may receive prior instruction before performing the task, then do the task on his or her own. For instance, since moving into my seventy-year-old house, I have had to repair (or at least attempt to repair) numerous problems with plumbing. In order to make these repairs, I read books and “old home” magazines, watched home-repair shows, and, when all else failed, asked my brothers (who live in different cities) for advice. But my real learning about plumbing happens from the actual experience of working on the plumbing—handling the unfamiliar wrenches, crawling around the pipes, and trying to figure out which part goes where without causing more damage. This is real experiential learning—the learning is in the doing or the experience.

But how would this experience look if I were able to learn plumbing and old-home repairs from a situated framework? I might still take all the initial steps of reading and schooling myself on plumbing, and I would definitely still “do” something. However, since situated cognition emphasizes interaction between the learner and other learners and tools in a sociocultural context, I might also join a home-repair club or group of old-home owners interested in working on their houses. We might meet at each other’s homes to work together and problem solve a particular plumbing problem. The more experienced members in the group may teach the less experienced. I might not only learn solutions to my immediate plumbing problems but also solutions to possible future problems sure to eventually occur in older houses. The context of older houses and the dialogue between and among old-home owners with plumbing problems may take place as the task is being performed and therefore is integrally woven within the learning experience.

From a situated view, people learn as they participate and become intimately involved with a community or culture of learning, interacting with the community and learning to understand and participate in its history, assumptions, and cultural values and rules (Lave and Wenger, 1991, Fenwick, 2000). Thus, “learning is situated in interactions among peripheral participants and full participants in a community of meaning. These interactions take place in the context of practice and are characterized by modeling of both mastery of practice and the process of gaining mastery” (Jacobson, 1996, p. 23). These ideas of learning from more experienced members of a community and participation in cultures of practice have led to a number of concepts of planning and managing learning situations that can incorporate situated views of learning. Two of these concepts, cognitive apprenticeships (Farmer, Buckmaster, and LeGrand Brandt, 1992; LeGrand Brandt, Farmer, and Buckmaster, 1993; Rogoff, 1990, 1993, 1995) and communities of practice (Lave and Wenger, 1991; Brown and Gray, 1995;

Wenger, 1998), offer adult educators basic concepts and tools to better situate learning.

### **Situating Cognition in the World of Practice**

**Cognitive Apprenticeships.** Rogoff (1990, 1993, 1995) proposes that learning involves development in personal, interpersonal, and community processes. These phases are not necessarily sequential and are somewhat fluid, as members may move between phases. One mechanism for learning at these levels is through cognitive apprenticeships. LeGrand Brandt, Farmer, and Buckmaster (1993), for example, describe cognitive apprenticeship in continuing professional education as occurring in five sequential phases: modeling, approximating, fading, self-directed learning, and generalizing. *Modeling* occurs in two parts: behavioral modeling allows learners to observe performance of an activity by experienced members of a community, while cognitive modeling allows experienced members to share “tricks of the trade” with newer members. *Approximating* allows learners to try out the activity while articulating their thoughts about what they plan to do and why, and after the activity, reflecting about what they did and how it is different from the expert’s performance. In this phase, to minimize risk while at the same time allowing learners to approximate the real experience, role models provide *scaffolding*, which takes the form of physical aids, modeling tasks, and coaching. In the *fading* process, scaffolding and other support gradually decrease as learners’ abilities increase. *Self-directed* learning takes place as learners practice doing the real thing, adapting what is necessary from models and working on their own, receiving assistance only at their request. Finally, students *generalize* what they have learned through discussions and relate what they have learned to subsequent practice situations.

In the academic world of universities, cognitive apprenticeships can frame how newcomers to academe learn university life and expectations. For example, my job teaching developmental writing to adult students was about more than just teaching students the fundamentals of composition. It was also about helping students understand and become participants in academic culture. Instead of only listening to lectures and prescriptions about writing processes, students engaged in the activity of writing; scaffolding consisted of computers as tools for writing, writing labs, and discussions about writing situations and expectations. Students had dialogues among themselves, with more-experienced students, and with instructors about writing processes and general concerns about academic culture; thus, they moved through apprenticeships with coaching and scaffolding to some level of participatory appropriation within academic culture (Hansman, 1995; Hansman and Wilson, 1998). Graduate students also move through and among these phases as they work with their major professors as teaching assistants and as researchers, writing theses and dissertations. Indeed,

new faculty, especially those who are mentored, learn academic life through apprenticeship.

**Communities of Practice.** Communities of practice are self-organized and selected groups of people who share a common sense of purpose and a desire to learn and know what each other knows (Lave and Wenger, 1991; Brown and Gray, 1995; Brown and Duguid, 1996; Wenger, 1998). These groups can be somewhat informal in nature, for example, as basic as meal-time discussions of problems inherent in shared practice. Some may only be connected through e-mail or other on-line means. They are self-organized by the members themselves and may exist within larger organizational structures. Wenger (1998) describes the dimensions of the relationships within communities of practice as several concepts: *mutual engagement* of the participants that allows them to do what they need to do and binds members into a social entity; *joint enterprise* resulting from a “collective process of negotiations that reflects the full complexity of mutual engagement” (p. 77); and a *shared repertoire* of communal resources that belongs to the community of practice and includes “routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions, or concepts that the community has produced or adopted in the course of its existence, and which have become part of its practice” (p. 83).

To return to the example of learning to teach writing, I engaged in a self-organized community of practice of other novice and expert writing instructors. We shared a joint interest and were mutually engaged in understanding what makes up good teaching practice; at the same time we shared a repertoire of writing assignments and other classroom routines and tools to improve our practice. Similarly, Daley’s (1999) study of how professionals learn focused on the ways novice and expert nurses understood their own learning processes, how they learned to learn, how they could teach themselves, and how they built their own bank of knowledge. Most important, however, was that the expert nurses described learning so they could share their knowledge with novice nurses while at the same time learning from the process of sharing.

“Passion, commitment, and identification with the group’s expertise” (Wenger and Snyder, 2000b, p. 142) is the glue that holds these groups together. The group’s life cycle is also determined by the value these qualities provide to group members, not by organizational values or institutional schedules. The power in communities of practice is that they organize themselves, set their own agendas, and establish their own leadership. Thus, members of communities of practice may feel more connected to these small communities than larger organizational cultures. However, Wenger and Snyder (2000a) claim that “in the new economy, learning architects are embracing the natural designs of group learning and translating those designs to new organizational cultures and approaches” (p. 2). For example, at Hill’s Pet Nutrition facility, line technicians formed a group that met weekly to discuss successes and future challenges, and to gather expertise from each

other. This group met in a company conference room, but otherwise was self-supporting. Through their meetings, members of the group were able to propose a new system of pneumatic tubes to replace balky conveyer belts (Wenger and Snyder, 2000a). Although management initially rejected this idea, expertise knowledge from the line technicians combined with evidence from groups at other plants eventually led to the change. The result was rewarding for the company (fewer line delays) and for the group (developing problem solving and abilities to run the plant effectively).

The ideas of *cognitive apprenticeships* and *communities of practice* can provide adult educators with tools to redesign workplace and school learning to allow these communities to form. Brown and Duguid (1996) describe the challenge organizations and schools face “to redesign the learning environment so that newcomers can legitimately and peripherally participate in authentic social practice in rich and productive ways, in short, make it possible for learners to ‘steal’ the knowledge they need” (p. 49).

### **The Promise of Context-Based Learning**

Wilson’s journal chapter, “The Promise of Situated Cognition” (1993), predicted a future for adult learning that would take into account activity, culture, and tools. Yet eight years later, the ideas of learning in context and situated cognition have yet to be fully explored and developed in adult education. In my view, it is imperative that adult educators understand that learning can take place in many settings and therefore design programs that incorporate tools, context, and social interactions with others. These programs could take the form of internships, apprenticeships, and formal and informal mentoring programs that provide adult learners with real-world, context-based learning. Planners could also support situations for adults to participate in communities of practice in the cafeterias, student lounges, or computer labs (Bonk and Kim, 1998). Membership in professional organizations can also provide adults with the cultural context, tools, and social learning to progress in their fields or professions. For leisure learning, adults may participate in travel clubs, where the travel itself to new cultures and contexts provides the intersection of culture, tools, and contexts that shape learning.

Theories of context-based learning provide a powerful and egalitarian way of viewing knowledge production. Knowledge, skills, and abilities of those whom Lave (1988) refers to as “just plain folks”—those who historically and traditionally have not been counted as “experts,” such as the women in Lave’s grocery study or the line technicians at Hill’s Pet Nutrition Facility—are valued. Viewing knowledge and learning through this lens allows adult educators and program planners to create or enhance contexts for adult learning that allow learners to share in the design, process, and evaluation of their learning activities. As active members of communities of practice, adult learners can discover, shape, and make explicit their own

knowledge, thus intensifying the intriguing discussion about what counts for knowledge and learning in adulthood. Last, the real promise of context-based learning is that “knowing” of “just plain folks” is valued, thus enhancing the knowledge and development of adult learning theory.

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CATHERINE A. HANSMAN is assistant professor and program director of graduate studies in Adult Learning and Development at Cleveland State University, Cleveland, Ohio.

