

Kansas State University Libraries
New Prairie Press

Adult Education Research Conference

2002 Conference Proceedings (Raleigh, NC)

Situating Cognition: Knowledge and Power in Context

Catherine A. Hansman
Clebeland State University, USA

Arthur L. Wilson
Cornell University, USA

Follow this and additional works at: <https://newprairiepress.org/aerc>

 Part of the [Adult and Continuing Education Administration Commons](#)



This work is licensed under a [Creative Commons Attribution-Noncommercial 4.0 License](#)

Recommended Citation

Hansman, Catherine A. and Wilson, Arthur L. (2002). "Situating Cognition: Knowledge and Power in Context," *Adult Education Research Conference*. <https://newprairiepress.org/aerc/2002/papers/24>

This is brought to you for free and open access by the Conferences at New Prairie Press. It has been accepted for inclusion in Adult Education Research Conference by an authorized administrator of New Prairie Press. For more information, please contact cads@k-state.edu.

Situating Cognition: Knowledge and Power in Context

Catherine A. Hansman
Cleveland State University, USA
Arthur L. Wilson
Cornell University, USA

Abstract: Although adult education as a field has shown interest in the work of Lave and others concerning situated cognition, the authors argue that adult education as a field has misappropriated some of the central concepts of situated cognition.

The ideas of the social context as central to learning have increasingly been mentioned in discussions of learning in adulthood (i.e., Wilson, 1993; Fenwick, 2000; Hansman, 2001). Situated learning emphasizes setting and activity as dialectically integrating people, tools, and context within a learning situation. Wilson (1993) explains 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. . .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).

Psychological and behavioral understandings of learning explain learning as an internal, individual, mental process in which the mind acquires and stores knowledge for future use in any context. Proponents of situated cognition (i.e., Lave, 1988, 1996; Rogoff, 1995; Wersch, 1991) posit that learning is not something that happens in independent isolation, or just inside the head, but instead is shaped by the context, culture and tools in the learning situation. As Wersch contends, “Psychological research is often grounded in the assumption that it is possible or even desirable to investigate the individual removed from his or her social cultural context. . .the assumption is that cultural and social issues can be incorporated as additional variables once the basic forms of mental functioning in the individual have been isolated and understood” (1991, p. 85). In contrast to this individuated view of learning, situated views of learning maintain that people learn as they interact with and within a community of practice, gaining understanding while participating and shaping its history, assumptions, cultural values, and rules (Lave & Wenger, 1991; Fenwick, 2000; Wenger, 1998).

Although adult educators have shown interest in situated cognition, we think they have misappropriated or misunderstood situated cognition in several ways. First, whereas Lave (1988) drew directly on Giddens' theory of structuration (1984) to argue that we cannot isolate individual's cognitive activity from the social context in which it occurs, many proponents of situated cognition in adult education have continued to privilege a model of individual mental cognition. The second problem is that because of that privileging, "context" always becomes an “add on” - learning activities are viewed as happening to the self and the sense of context as constituting and being constituted by the learners is lost. Thus context remains an inert, benign, background setting, a stage on which learning is enacted but not influenced or affected in any substantive way. Third, a political analysis of how learning communities may encourage the continual replication of hegemonic culture within organizations or institutions rather than foster the ownership of knowledge by students and participants (Lave, 1988) is missing in most discussions concerning situated cognition. Finally, the issue of power – who plans, participates, and shapes learning, as well as analysis of how power

relationships may affect learning within communities of practice – is not really addressed in discussions of situated cognition in adult education.

The purpose of this paper is to examine research and theories concerning situated learning from a critical perspective. We argue that it is not enough to simply integrate a “situated component” to learning activities, or to add situated ideas as theoretical framework to empirical studies of adult learning. Rather, the real power of situated cognition is that it provides egalitarian ways of viewing knowledge production. Using situated cognition as a planning focus allows the knowledge, skills and abilities of those Lave (1988) refers to as “just plain folks” -- those who historically and traditionally have not been counted as “experts” – to be valued, thus enhancing the knowledge base of adult education and the development of adult learning theory.

Concepts of Learning

Cognitive psychological views of learning initially focused on the symbolic activities humans use to make sense and meaning of their world and themselves. However, the focus switched from meaning making to the processing of information (Bruner, 1990). The central processing systems of computers became the way learning was thought of as happening in humans: “input” through sensory registers (eyes, ears, touch, etc.), then processing of this “input” in short and long term memory controlled by an “executive control process” (the overall brain) (Gredler, 2001, p. 171).

A central concept in psychological views of learning is that knowledge, once gained through individual thought and action, is portable and can be easily transferred to any context (Brown, Collins, & Duguid, 1989; Lave, 1988). From this view, knowledge is gained through scientific, empirical analysis and thus can be easily abstracted to any situation; once learned in one setting, the learner need only apply this knowledge in other settings. The context in which the knowledge is acquired, and the meaning adult learners make, is ignored and viewed as peripheral to the learning. Lave (1988) uses the metaphor of a toolbox to describe this concept of knowledge: “Knowledge is conceived as a set of tools stored in memory, carried around by individuals who take the tools out and use them...after which they are stowed away again without change at any time during the process” (p. 24).

Situated Learning

Described as “neo-Marxist” (Gredler, 2001, p. 74), Lave (1988), in explaining her situated perspectives on learning, cites the current alienated conditions in capitalism that provide little opportunities for individuals to develop deep knowledge, skills, and mastery of learning. In contrast to psychological views of learning, Lave and other proponents of situated cognition argue that knowledge and learning are intertwined with the context in which they occur. The central notion is that learning is inherently social in nature. Lave argues that when viewing learning from a situated framework it becomes apparent that action, thought, feelings, and values are not separate from their collective, historical forms of located, interested, and at times, conflictual meaningful activity, and further, that “knowledge in practice, is the locus of the most powerful knowledgeability of people in the lived-in world” (Lave, 1988, p. 14). Situated cognition, then, emphasizes interactions among the learner, other learners, and tools in a sociocultural context. 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. 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). The knowledge gained through learning in a situated context, then, is real-life knowledge, reflecting the values of the learners themselves.

From a situated view, people learn as they participate and become intimately involved with a community or culture of learning, interacting with the community, learning to understand and participate in its history, assumptions, cultural values, and rules (Fenwick, 2000; Lave & Wenger, 1991). As Jacobson (1996) claims, "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" (p. 23). The nature of the interactions among learners, the tools used within the interactions, activity, and the social context within which the activity takes place shapes the learning-and knowing of the learners. Thus, as Lave indicates, real world contexts, social relationships and tools make the best learning environments. Through participation in a community of learning learners learn in a hands-on project based approach to instruction. The teacher's role in the discourse community in the classroom is to be actively involved in assisting students to overcome obstacles by probing the limits of their understanding with difficult cases, and helping students manage uncertainty (Gredler, 2001).

Lave (1988) and Brown, Collins and Duiguid (1989) describe the culture of school activity as being different from the everyday activities and culture that constitute learning and give meaning in the real world. Lave's 1988 book analyzes learning in real world contexts, such as grocery stores and Weight Watcher, examining the learning of "just plain folks," or JPF's. In contrast to students who learn in classroom settings, JPF's act on emerging problems, dilemmas and situations. The social context provides the environment in which JPF's negotiate meaning and socially construct their knowledge. Learning is dialectically constituted situated activity, making it "not possible to separate the means of problem solving from its ends. . .this, in turn, implies that procedures for solving problems, as well as their goals, are inherently value-laden" (Lave, 1988, p. 175).

The 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 incorporate situated views of learning. In the educational technology field, situated cognition has been adopted as a valid and useful "tool" to teach computer and software applications and also to use technology to enhance the teaching process. For example, McLellen (1996) discusses how video and audio recorders, computers and virtual reality devices can be used to promote reflection and coaching, using situated learning as a model because "knowledge must be learned in context" (p. 12). McLellen further suggests that contexts can be the actual work setting, a realistic surrogate setting, or "real world anchors," which could include real world situations or virtual situations recreated on video or multimedia programs. However, the notions of JPF's acting on real-world emerging problems seems to be somewhat lost. Along with the interest the educational technology field has taken in situated learning, other models emerging from the situated framework, such as cognitive apprenticeships (Farmer, Buckmaster, and LeGrand, 1992; Brandt, Farmer and Buckmaster, 1993; Rogoff, 1995), and communities of practice (Lave and Wenger, 1991; Wenger, 1998), have been widely discussed and developed.

Cognitive Apprenticeships

Rogoff (1995) discusses learning as involving development in three planes: personal, interpersonal, and community processes, reflecting different phases of focus in sociocultural activity. These phases are not necessarily sequential and are somewhat fluid as members may move between phases. Brandt, Farmer, and Buckmaster (1993) used this application of situated cognition to describe cognitive apprenticeship in continuing professional education. They

generalized it 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 than the model’s performance. In this phase, to minimize risk while at the same time allowing learners to approximate the real experience, 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.

Communities of Practice

Communities of practice are self-organized and selected groups of people whom share a common sense of purpose and a desire to learn and know what each other know (Brown & Duguid, 1996; Lave & Wenger, 1991; Wenger, 1998). These groups can be somewhat informal in nature. Wenger (1998) describes the dimensions of the relationships within communities of practice as consisting of 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 negotiation that reflects the full complexity of mutual engagement” (p. 77); and a *shared repertoire* of communal resources that belongs to the community of practice that 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). Greeno (1997) explains that participants become attuned to constraints in their real-world work situations through participation and transform these experiences so that they can meaningfully participate in a broad range of other work situations. Wenger and Snyder (2000) describe “passion, commitment, and identification with the group’s expertise” (p. 142) as the glue that hold communities of practice together. The group’s life cycle is also determined by the value they 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 the larger organizational cultures.

Conclusion: Rethinking Situated Learning

Although studies and models embracing context-based learning and situated cognition have become more prevalent in the lifelong and adult learning literature, (i.e., Farmer, Buckmaster, & LeGrand, 1992; Hansman, 2001; Hansman & Wilson, 1998; Wilson, 1993) many of these studies focus on the “technical how to” aspects of situated learning, as in technology education, or on applications/examples of situated learning. Other studies (i.e., Brandt, Farmer, & Buckmaster, 1993) utilize theories of situated cognition as an additional lens through which to view adult learning but provide no real political analysis of the underlying importance of ownership of knowledge in situated learning. Lave (1996) argues that it is not enough to simply “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). Although many studies and models recognize and discuss context as essential to learning in a situated framework, usually these discussion center on happenings

to the learner in some kind of context, without the sense of context's constituting and constituted nature. Context then, in this analysis, still remains static and not dynamic - an innocuous background setting.

Concepts of cognitive apprenticeships, for example, are another way in which the theories of situated cognition may be misunderstood and misused. Apprenticeships are typically defined and understood as a student serving an expert - further reifying the hegemonic notions that there are great differences between "experts" and "just plain folks." JPF's are "depersonalized and devalued further; no longer 'folks,' they are perceived and theorized as JPF's. The knowledge of JPF's is not seen as belonging to individual persons emerging from life problems and situations; rather, it become an exploitable resource for the institutions of schooling and research" (Damarin, 1996a, p. 83). As Lave (1988) discusses in her work, some students "hide" the effective strategies they developed as "just plain folks" so that teachers believe that they solved problems in the "approved" school way, thus illustrating Giddens's (1984) notion of recursive constitution: social practices, like education, both produce effects as they reproduce the practices themselves. The problem adult educators face, then, is to analyze how learning communities may encourage the continual replication of hegemonic culture within organizations or institutions rather than foster the ownership of knowledge by learners and participants and to plan programs that counteract this hegemony. Power, realized or implicit, affects learning situations, and should be an ethical consideration for those in position to plan programs for adult learners.

Finally, the political egalitarian/emancipatory promise of situated learning is frequently lacking in discussions concerning it and adult education. Situated learning is based upon research which "acknowledges and honors skills and abilities which have been invented and practiced by persons whose intelligence and academic ability have often been discounted if not maligned" (Damarin, 1996b, p. 192). Viewing learning and knowledge construction from a situated perspective validates the knowledge of "just plain folks," elevating them to "experts" of their own knowing. Thus learners from diverse backgrounds whose knowledges have been discounted become authorities of their learning.

Learners, through their relationships with others and the context in which they are situated, "own" their knowledge and have power over their learning. Social practices, like education, both produce effects as they reproduce the practices themselves. Ignoring setting and activity, and the underlying issues concerning power and knowledge causes us to have a limited view of adult learning. Paying attention to context, activity, and tools allows us to understand how adult learners discover, shape, and make explicit their own knowledge, thus furthering intriguing discussions as to what counts for knowledge and learning in adulthood.

References

- Brandt B. L., Farmer, J. A., and Buckmaster, A. (1993). Cognitive apprenticeship approach to helping adults learn. In D. Flannery (ed.) *Applying cognitive learning theory to adult learning. New directions for adult and continuing education*, 59 (pp.69-78). San Francisco: Jossey-Bass.
- Brown, J., Collins, A. and Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18 (1), 32-42.
- Brown, J. and Duguid, P. (1996). Stolen knowledge. In H. McLellen (ed.) *Situated learning perspectives*. Englewood Cliffs, NJ: Educational Technology Publications.
- Bruner, J. S. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.

- Damarin, S. (1996a). Schooling and situated knowledge: Travel or tourism? In H. McLellen (ed.) *Situated learning perspectives* (pp. 77-87). Englewood Cliffs, NJ: Educational Technology Publications.
- Damarin, S. (1996b). The emancipatory potential of situated learning. In H. McLellen (ed.) *Situated learning perspectives* (pp. 189-200). Englewood Cliffs, NJ: Educational Technology Publications.
- Farmer, J., Buckmaster, A., and LeGrand, B. Cognitive apprenticeship: Implications for continuing professional education. (1992). In H. K. Morris Baskett and V. Marsick (eds.) *Professionals' ways of knowing: Findings on how to improve professional education. New directions for adult and continuing education*, 55 (pp. 41-49). San Francisco: Jossey-Bass.
- Fenwick, T. (2000). Expanding conceptions of experiential learning. A review of the five contemporary perspectives on cognition. *Adult Education Quarterly*, 50 (4), 248-72.
- Giddens, A. (1984). *The constitution of society*. Berkley: University of California Press.
- Gredler, M. E. (2001). *Learning and Instruction: Theory into Practice (4th edition)*. Columbus, Ohio: Merrill Prentice Hall.
- Greeno, J (1997). On claims that answer the wrong question. *Educational Researcher* (27) 1, 5-17.
- Hansman, C. A. (2001). Context-based adult learning. In S. Merriam's (ed.) *The new update on adult learning theory. New directions for adult and continuing education*, 89 (pp.43-52). San Francisco: Jossey-Bass.
- Hansman, C. and Wilson, A. (1998) Teaching writing in community colleges: A situated view of how adults learn to write in computer-based writing classrooms. *Community College Review*, 26 (1), 27-41
- Jacobson, W. (1996). Learning, culture, and learning culture. *Adult Education Quarterly*, 47 (1), 27-41.
- Lave, J. (1988). *Cognition in practice: Mind, mathematics, and culture in everyday life*. Cambridge, England: Cambridge University Press
- Lave, J. (1996). The practice of learning. In S. Chaiklin and J. Lave (eds.) *Understanding practice: Perspectives on activity and context* (pp. 3-34). Cambridge, UK: Cambridge University Press.
- Lave, J. and Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press
- McLellan, H. (1996). Situated learning: Multiple perspectives. In H. McLellen *Situated learning perspectives* (pp. 5-17). Englewood Cliffs, NJ: Educational Technology Publications.
- Rogoff, B. (1995). Observing sociocultural activity in three planes: Participatory appropriation, guided participation, and apprenticeship. In J. Wertsch, P. del Rio, and A. Alvarez (eds.) *Sociocultural studies of the mind*. Cambridge, England: Cambridge University Press
- Wertsch, J. V. (1991). A sociocultural approach to socially shared cognition. In L. B. Resnick, J. M. Levine, and S. D. Teasley (eds.) *Perspectives on socially shared cognition* (pp. 85-100). Washington, D.C.: American Psychological Association.
- Wenger, E. (1998). *Communities of practice*. Cambridge, England: Cambridge University Press.
- Wenger, E. and Snyder, W. (2000). Communities of practice: The organizational frontier. *Harvard Business Review*, 139-145.
- Wilson, A. L. (1993). The promise of situated cognition. In S. Merriam (ed.) *An update on adult learning theory. New directions for adult and continuing education*, 57 (pp. 71-80). San Francisco: Jossey-Bass.