

Three Phases of Learning: Learning *in*, *from*, and *for* action

Daniel Wilson
Harvard Graduate School of Education
February 2009

Learning in today's organization is becoming an increasingly difficult task. Fewer organizations are performing in simple, well-structured contexts in which employees simply apply knowledge and skills they learned from classrooms and training sessions. Organizational learning in sectors such as banking, health care, and engineering, can no longer solely rely upon traditional forms of training because new knowledge and practices are emerging from collective action and experience. For many decades the dominant model of imparting well-known knowledge and skills for predictable performances suited organizations just fine. But success in today's complex world requires new models of learning in rapidly evolving and complex settings. New, emerging forms of learning are necessary that leverage the informal, socially constructed, and action-driven realities of the workplace. Learning needs to be rethought not as an activity to be done for performance, but as something that is organized around performance. Understanding how to learn *in*, and *from*, and *for* (IFF) action is fast becoming paramount.

Learning IFF Action Model

Learning in, from, and for action attempts to refocus current learning programs away from designing predominantly formal, out-of-the flow learning opportunities and towards connecting informal learning moments around the flow of everyday work. In contrast to other learning models that have contemporary currency, such as blended learning or mobile learning, a learning IFF action model looks not at the mixtures of virtual and face-to-face learning opportunities, but at the temporal phases of learning in and around work activities. The coming paragraphs describe three distinct phases, each with their own affordances and challenges for individual and organizational learning.

Learning in action

Learning in action describes the development of knowledge and skills in the very moments of performance. It draws attention to the in-the-moment behaviors that support learning within the window of work. Studies, such as landmark research done by the Center of Workforce Development (1998), suggest that over 70% of knowledge is developed in the everyday flow of work activities, such as interactions during shift changes or while troubleshooting a problems. Effective learning in action depends on knowledge building behaviors, such as seeking feedback, sharing information, asking for help, discussing errors, experimenting, monitoring performance, and planning during slack-time (Donnellon, 1996; Edmondson, 1999; Hausler, Klampfer, Amacher, & Naef, 2004; Salas, Burke, & Stagl, 2004; Scardamalia, 2002). For example, Edmondson, Bohmer, & Pisano's (2001) study of cardiac surgery teams learning to perform operations with stint technologies revealed that what separated the most effective teams was not their formal classroom preparation or post-operation debriefings, but in the moment activities of speaking up, giving feedback, and pooling ideas. In increasingly uncertain and complex contexts, in

which there exists a high need for fast response, learning in action is a crucial component of organizational learning in tomorrow's world.

Of course, learning in action bumps up against very real challenges. The sheer volume of information and data can make it difficult for individuals to focus attention, distill patterns, and learn new knowledge and skills. In the face of pressures to perform, few employees may have time for testing ideas, gathering feedback, and integrating new knowledge. Effectively capturing and transferring emerging knowledge across teams is difficult. Moreover, as Harvard cognitive scientist Dr. David Perkins points out, while in the midst of action we are prone to problem blindness: the inability to detect novelty and anomalous data. When we are in the flow of our activities it is difficult to remain open and attentive to discrepancies. And, even if we are, creating radically new actions and transforming our assumptions requires time and reflection. This brings us to our second phase of learning: learning from action.

Learning from action

Decades of good learning practices in organizations have been built upon a prevailing principle: knowledge and skills are developed through reflection on experience. Perhaps most famous of these approaches is the US Army's "after action review" process in which military personnel engage in a retrospective reflection of a mission in order to distill out lessons learned. Learning from action describes the moments after performance that aim to extract patterns and insights in order to inform future practice. Such moments are valuable because they can provide opportunities to question prevailing assumptions, elicit multiple perspectives, and revise beliefs about goals, values, and performance criteria. By stepping away from the fray of everyday action, these out of the moment structures promote double-loop or transformative learning in an organization (Argyris & Schön, 1996; Kegan & Lahey, 2000). Team debriefings, post-mortems, and discussing lessons learned each aim to support a deeper level of learning in individuals and organizations.

Similar to learning in action, learning from action also faces very real challenges. Too many organizations display a bias towards action and moments of reflection are often seen as not part of "real" work. After a project concludes, individuals often turn to the next challenge or work front coming their way. The day-to-day flow of urgent matters makes it difficult to support learning from action. Even when moments for reflection are created, many individuals may not feel safe raising dissenting opinions or discussing errors. Scape-goating, blame, and threats to power can easily undermine the promise of learning from action. When discussing experiences, several inherent psychological biases skew sense-making. Confirmation bias is a tendency to interpret information in a way that confirms one's prior beliefs. And hindsight bias is an inherent inclination to believe that events occurred more predictably than they in fact did. Biases such as these are hard to keep in check. Once lessons and insights are captured, codifying and communicating them to others is rarely easy. Choices about how to represent the knowledge learned and level of context to include affect the transfer of learning to future performances. This brings us to our last phase: learning for action.

Learning for action

Traditional approaches to learning attempt to develop knowledge and skills prior to performance, such as classroom training, workshops, and lunch-time webinars. These interventions occur out of the flow of action and create dedicated time for skill development and practice. Such moments are important. They tend to be low-risk settings in which learners can practice, fail, and get targeted feedback to improve their knowledge and skills before they use it in higher-stake work settings. However, the downsides of learning for action are well known. Transferring what is learned back into arenas of action is difficult, particularly when the knowledge is complex and old habits must be forgotten. Maintaining relevant and updated content to be learned can often lag behind the new knowledge and information that is rapidly emerging from practice. Time constraints and demands for accelerating learning complicate this even further. And there are developmental challenges as well – novices learners with little experience or repertoire need different sorts of scaffolds than those with more experience.

| | Learning in Action | Learning from Action | Learning for Action |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main Affordances | <ul style="list-style-type: none"> Occurs in the flow of practice Knowledge and skills are on display in everyday activities (e.g. problem-solving) Environment offers immediate feedback and access to results | <ul style="list-style-type: none"> Extracts patterns and deeper insights from experience Opportunities to question assumption and beliefs Supports double-loop, transformative learning | <ul style="list-style-type: none"> Dedicated moments for developing new knowledge and skills Lower risk settings for failure and practice |
| Key Challenges | <ul style="list-style-type: none"> Volume of information Problem blindness Time Urgency to perform limits potential to transform | <ul style="list-style-type: none"> Action bias Social safety of participants Interpretative biases Codification and sharing insights | <ul style="list-style-type: none"> Designing for transfer Relevancy and time lags Accommodating developmental needs |
| Existing Examples | <ul style="list-style-type: none"> Help seeking and knowledge sharing routines Norms of error detection and discussion Just-in-time knowledge delivery Planning during slack-time | <ul style="list-style-type: none"> After-action reviews Debriefings Post-mortems Lessons learned | <ul style="list-style-type: none"> Classroom-based learning Simulations Pre-mortems Peer consultations Pre-performance feedback routines |

Effective learning in today's (and tomorrow's) organizations needs to harness and connect the learning potential that exists across the natural phases of everyday work. Integrating learning into a way of work requires a shift towards viewing learning in action as the primary point of impact, and learning from and for action as important supportive moments for knowledge and skill development.

Three integrating approaches

How can we begin to integrate learning across these phases? Several organizations are experimenting with redesigning with these phases and mind and a number of noteworthy scholars offer some insights about how leaders of learning can link learning in, from, and for action.

A Cognitive Perspective: Braiding Fast & Slow Cognition

Harvard cognitive psychologist David Perkins believes that effective learning across these phases is best done by initiatives that thoughtfully “braid” the ways the mind works. He believes the human mind has two distinctive sense-making gears that cut across learning in, from, and for action: fast and slow cognition. Our everyday work is a natural place where the fast cognitive gear is in operation, recognizing patterns and quickly using intuition to interpret and act. This contrasts with the slow cognitive gear that kicks in when we deliberately stand back and reflect, reason, and create explicit formulations from our experiences. Fast cognition is the gear most of us use very well and it is extremely important. As Perkins explains, in the real world of work we use fast cognition when we can and slow cognition when we have to. This poses particular challenges to learning in, from, and for action. In fast cognitive mode we get stuck by our tendency to stay in that gear and act mindlessly across these phases of learning. In slow mode we may create insights as we learn from and for action, but we revert to our old habits when we step back into our work day.

The challenge for the future, Perkins argues, is that we need to unlearn at the fast cognitive level. To do this we must “braid learning”: design learning such that fast and slow sense-making come together. Some practices already in use attempt this braiding, such as learning for action through and action projects, learning from action in

support groups, and learning in action through stop-action coaching and feedback. Such initiatives throttle back the tendency towards fast cognition and inject slow cognition into the learning process. Perkins' cognitive perspective encourages designers of learning to weave together fast and slow learning interventions across these phases.

A Social Perspective: Cultivating Critical and Public Reflection

Joe Raelin, the Director of the Center for Work and Learning at Northeastern University, believes that what integrates learning for, in, and from action is creating a social culture of public and critical reflection. This can be done by adopting a "work-based learning" perspective in which the location of learning occurs in action and is supported by formal structures for reflection during, after, and before action. Refocusing learning efforts to be built around the work arena itself leverages the fact that the tacit knowledge in use is far more powerful in performance than explicit knowledge that has been historically taught in classrooms. And tacit knowledge is reliably surfaced and revised through public and critical reflection.

Raelin describes critical reflection as the public practice of stepping back to ponder and express the meaning to self and to others in one's immediate environment of what has, will, or is happening. It focuses on the past, present, and future and we involve others in the examination of experience. So at its core it is a social activity that has many benefits, such as helping us to reduce errors in our perception, adjust to new contexts, surface assumptions, and reduce the gap between what we say we will do and what we do. Benefits such as these can be seen in several existing learning designs such as programs that emphasize action learning, communities of practice, and cooperative inquiry. What these initiatives have in common is that they are planned engagements that emphasize collective reflection on experience, thus expanding and creating knowledge while at the same time serving to improve practice. They draw on social practices of asking open-ended questions, challenging assumptions, or probing while avoiding interrogation. Critical and public reflection becomes a thread that weaves together good practices of learning in, from, and for action.

A Structural Perspective: Supporting Systemic Expansive Learning

Yrjö Engeström, a professor of adult education at the University of Finland, argues that, though cognitive and social perspective are important, effective forms of learning must aim not just at individuals but at the very work structures and systems of activities in the organization. Learning in, from, and for action should be done to the system itself. Too much emphasis has been historically placed on vertical models of individual learning when in fact systems need to become more flexible, shifting laterally in their objectives and activities. He argues for a form of learning called "expansive learning" that engages multiple stakeholders in the system to learn from, for, and in action. Groups come together outside of their organization in order to create new models of work by analyzing existing contradictions, creating new strategies, and testing them in action. He describes this type of work as "knotworking," a pulsating movement of tying, untying, and retying together threads of structural activity. There is not a center of authority in this process dictating what must be learned. Rather it has distributed agency. It is both top down and bottom up problem solving that requires negotiation and flexible agreements. Like Perkins and Raelin, this approach seeks to integrate learning across phases. Members learn from action, produce ideas for action, and actively experiment in action. However, what differentiates this perspective from the previous is that "who" is learning are not individuals but the social system itself and its patterns of structural relationships.

Learning across phases of in, from, and for action are illustrated by these three emerging perspectives. A cognitive perspective draws attention to understanding the fast and slow sense-making gears of individuals across the phases and encourages designers to braid both together to best support learning. A social perspective identifies critical and public reflection as a key collective behavior and challenges designers of learning such moments throughout the phases of learning. And a structural perspective shifts attention away from the individual and towards the system of activities and how they can be transformed. Though the authors used to illustrate these perspectives hold their distinct viewpoints, one can imagine combinations of the three co-existing in a powerful learning in, from and for design.

Looking to the Future

This article seeks to spark a shift in contemporary discussions away from traditional forms of learning that are failing to address the increasingly complex and fast-changing performance contexts in many organizations. We use the shorthand “learning IFF action” to suggest an emerging models need to focus on how learning occurs across the phases of learning in, from, and for action. The phrase “IFF” also has an interesting secondary meaning. In the domain of mathematics it means “if and only if”, a bi-conditional logical link, that suggests that learning occurs if and only if there is action, and action occurs if and only if there is learning. This logical definition feels appropriate to the challenges organizational learning faces in the coming years. Effective knowledge and skill development in tomorrow’s workplace can only occur through supportive actions in and around everyday work. And effective action in tomorrow’s workplace can only occur through learning practices that are embedded in everyday work.

Bibliography

- Argyris, C., & Schön, D. A. (1996). *Organizational learning II: Theory, method, and practice*. Reading, Mass.: Addison-Wesley.
- Center for Workforce Development. (1998). *The teaching firm: Where productive work and learning converge*. Newton, MA: Education Development Center.
- Donnellon, A. (1996). *Team talk: The power of language in team dynamics*. Boston: Harvard Business School Press.
- Edmondson, A. C. (1999). Psychological safety and learning behavior in work teams. [Empirical research (interviews, observation, surveys)]. *Administrative Science Quarterly*, 44(4), 350-383.
- Edmondson, A. C., Bohmer, R., & Pisano, G. (2001). Speeding up team learning. *Harvard Business Review*, 79(9), 125-132.
- Hausler, R., Klampfer, B., Amacher, A., & Naef, W. (2004). Behavioral markers in analyzing team performance of cockpit crews. In R. Dietrich & T. M. Childress (Eds.), *Group interaction in high risk environments*. Hampshire: Ashgate.
- Kegan, R., & Lahey, L. L. (2000). *How the way we talk can change the way we work: Seven languages of transformation*. San Francisco: Jossey-Bass.
- Salas, E., Burke, C. S., & Stagl, K. C. (2004). Developing teams and team leadership: Strategies and principles. In D. V. Day, S. Zaccaro, J. & S. M. Halpin (Eds.), *Leader development for transforming organizations: Growing leaders for tomorrow* (pp. 325-355). Mahwah, NJ: Lawrence Erlbaum Associates.
- Scardamalia, M. (2002). Collective cognitive responsibility for the advancement of knowledge. In B. Smith (Ed.), *Liberal education in a knowledge society* (pp. 67-98). Chicago: Open Court.