Factors that affect the epistemology of group learning:
A research-based analysis.

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Abstract: This examination of factors that affect group learning is a first step toward developing a pedagogy of group learning, in contrast to individual learning.

Purpose

There is a growing recognition in our society that the complex challenges created by an increasingly interdependent world are more effectively met by creative teams or groups of people than by individuals working alone. This society's long tradition of valuing individualism creates habits of mind that make it difficult to learn how to work and learn collaboratively. We note that our current theories about learning construe the learner to be an individual person, and contend that a theory and practice of group learning could contribute significantly to our capacity to reenvision learning for today's world. Adult educators have long based their practice on the belief that individual learning is supported by group participation, but they have not conceptualized the group itself as a learner (Imel, 1996).

We call for a pedagogy of group learning. The purpose of this paper is to work toward an epistemology of group learning on which such a pedagogy might be based. By epistemology, we mean a description of the fundamental relationship between the knower and the known (Guba & Lincoln, 1994; Heron, 1996). Thus, we ask "How does a group as a knowing system come to know what it knows?"

Method

In this paper we report our findings when we examined published case studies of groups involved in the process of group learning. The term "group learning" is often used in the literature to refer to the phenomenon of individual learning that is supported by a group. Although important, this phenomenon was not our focus as we scanned the literature for descriptions of group learning. The definition that guided our search is that group learning is indicated when all members perceive themselves as having contributed to a group outcome, and all members of the group can individually explain what the group as a system knows.

Many of the reports we read were created for purposes other than our own, so we were dependent on the richness of the author(s)' descriptions of the group's context and learning strategies. When the author(s) favored interpretation or conceptual analysis over description, we were less able to interrogate the research report for answers to our own questions. We perceive our review to be only a tentative beginning in the creation of an epistemology for group learning and a preliminary step in describing an agenda for further research.

The nineteen case studies on which our analysis is based come from reports of groups learning is three different contexts: Seven describe teams learning in the workplace where the team has been vested with a management or problem-solving task (Brooks, 1994; Gavan, 1996; John, 1995; Kasl, Marsick & Dechant, in press; Lynn, 1995; Lynn, Morone, & Paulson, 1996; Marsick, 1990). Two describe the learning experienced by research teams, one a team of community-based women (Whitmore, 1994) and the other a report of our own experience as academy-based researchers (Kasl, Dechant, & Marsick, 1993). Ten describe the learning experienced by cooperative or collaborative inquiry groups (Bray, 1995; De Venney-Tiernan et.al., 1994; Gerdau, 1995; Reason, 1988; Smith, 1995; thINQ, in press; Traylen, 1994; Treleaven, 1994; Yorks, 1995; Zelman, 1995). Group size ranged from 3 to 20. With the exception of four groups, members were typically upper-middle-class professionals and were more often white than of color. There are three cases from Great Britain, one from Australia, one from Canada, and fourteen from the United States.

Derived from our own and others' work, we began with a set of analytic categories. To examine group learning strategies, we searched for information about multiple ways of knowing or holistic modes of engagement, and for descriptions of action and reflection. We looked systematically at the contextual variables of group purpose, formation and composition, the larger system in which the group is embedded, role and process of facilitation, time frame within which the group operated, and the group's learning outcomes. In addition to our initial analytic categories, we tried to be alert to other information, in particular to insights into the phenomenological experience of group learning which we imagined might include such themes as empowerment or relationship of individual ego and group identity.

Findings

Group Purpose, Formation, and Setting. Our cases illustrate important differences associated with contextual variables of purpose, formation, and setting which contrast the ten cooperative/collaborative inquiry cases with the seven workplace studies. The workplace cases describe intact organizational work teams, cross-functional groups, or special purpose groups created to develop new products. Although seven of the ten inquiry groups were convened in a workplace setting, group formation and purpose are different from the workplace cases. In cooperative/collaborative inquiry, group members are invited to participate and participation is voluntary; often the initiator is a peer. The norms of inquiry groups (Heron, 1996; Reason, 1994; thINQ, in press) demand functional equality among participants and define the group's purpose as a learning endeavor. Thus, even though many of these groups were formed in a workplace context, their purposes differ significantly from the groups described in the seven studies of

workplace teams. These latter groups are assigned a purpose by the larger organization in service of organizational needs; inquiry groups are composed of persons who define for themselves what the group's learning task will be and the purpose is primarily individual skill-building, personal development, or pursuit of a personal curiosity, albeit that the increased capacities often also serve the larger organization.

In our group of nineteen case studies, there is a confounding between setting and group purpose: Six of the workplace cases but none of the inquiry groups are in product-oriented, corporate settings. Only one of the workplace groups and all of the inquiry groups are in service-oriented contexts, associated either with education or health care.

We turn to a discussion of learning strategies. In our limited space, we focus only on the findings that are most directly related to the epistemology of group learning.

Action/Reflection. Most of our cases provide rich description of action/reflection cycles, although in three cases the rhythm of the action/reflection is different from what the group initiator anticipated. In these cases, groups stayed in a prolonged period of action before reflecting on what could be learned from their actions. Two of these (Smith, 1995; Traylen, 1994) were composed of community women for whom reflection was less comfortable than action; the third was a group of university faculty and administrators whose project began as a cooperative inquiry but soon evolved more into the shape of action research (Yorks, 1995). Cases that did not show much reflection describe workplace teams (Gavan, 1996; John, 1995).

Finding Meaning, Not Making It. Various strategies for taking a group outside analytic modes of knowing stimulated group learning. Some established norms of story-telling (Smith, 1995; Treleaven, 1994), some created experiential exercises (Marsick, 1990; Reason, 1988; Zelman, 1995) or captured their learning through art and metaphor (Bray, 1995; Gerdau, 1995). In other cases, groups discovered that important insights grew from getting "off task," that is, engaging in associational thinking that on the surface seemed not to be moving their agendas forward (Kasl, Dechant & Marsick, 1993; Kasl, Marsick & Dechant, in press; Marsick, 1990).

Going Public. With the two evaluation teams and a few inquiry group cases, preparing to share the group's knowledge with an audience outside the group was a catalyst for learning. The process of preparing interim oral reports for outside funding agents consolidated learning for two groups of community women. Experiencing respectful appreciation from their audiences precipitated in the women new respect for the importance of their work as well as growing self confidence (Smith, 1995; Whitmore, 1994). When groups prepared written reports, the process of reflecting on written words uncovered differences in perspectives that had not before been visible, and served as an impetus for further learning. (De Venney-Tiernan et.al., 1994; Kasl, Dechant, & Marsick, 1993; thINQ, in press; Whitmore, 1994). Workplace teams experienced the preparation of reports for managers or clients as an impetus for learning. In all cases, the act of going public was associated with a deadline, and therefore forced the group into an accelerated process of confirming the knowledge it had been creating.

Embracing Difference, Learning from Conflict. All groups faced the inevitable challenges created by interpersonal conflict and individual differences. One group of community women

who had been working together for some time without being able to communicate across ethnic and racial differences found that the context of collaborative inquiry helped them discuss the effect of these differences on their relationships, and then to bridge them (Smith; 1995). Another group struggled to cross the deep divide of class (Whitmore, 1994). Several groups had a pivotal incident in their development in which the resolution of a deep interpersonal difference catalyzed the group toward new levels of learning (Bray, 1995; Kasl, Marsick & Dechant, in press; Marsick, 1990; Yorks, 1995) or inhibited further learning (Brooks, 1994; Gavan, 1996).

Discussion

The distinction between learning and task in relation to group purpose is paramount. Groups formed primarily for the purpose of inquiry are more able to implement some of the learning strategies that facilitate group learning. When groups perceive themselves to be created to address a particular task, the pressure of task accomplishment makes group learning difficult.

Theory on the learning organization suggests that innovation emerges when a group can suspend the pressure for immediate resolution of a particular issue in favor of a freer, exploratory process characterized by "dialogue" and openness. Research reports suggest that this is difficult to do: Groups perceive that their managers are more interested in timely results than in generative ideas (Brooks, 1994; John, 1995); the nature of the problem itself channels members into routinized ways of thinking that hamper out-of-the-box thinking (Gavan, 1996); group members may find it difficult to step outside of a results orientation long enough to learn outside of existing frames of reference, even if they are told that they can do so (Marsick, 1990). Workplace learning is understood primarily as a means to develop employees so that they can work more effectively in the future, or in order to produce a more innovative solution to a challenge that cannot easily be addressed by individuals who work on their own. To the often-cited tension described in the group dynamics literature between task and process is added the tension of valuing learning for its own sake versus enhanced productivity.

This tension between learning and output is highly evident in the way in which time is experienced by the group. We suggest that group learning is enhanced when groups learn to reconceptualize time as a resource because they can then: generate ideas for which relevance is not immediately apparent; cycle back and forth between action and reflection, taking time to develop skillfulness with reflection; and create a context for shared history that leads to new ways of thinking, feeling, or acting. Research reports support our hypothesis, but also suggest that groups experience difficulty in reconceptualizing time in this way if members perceive their focus primarily as getting the job done, and if nothing is done to assist members to think about time differently.

Cranton (1996) has distinguished three kinds of group learning--cooperative, collaborative, and transformative; she equates cooperative learning with instrumental learning and task accomplishment. We observe that even when the inquiry groups in our sample convened for purposes of creating instrumental learning, they still defined themselves as focussed on inquiry, not task accomplishment. The distinctions seem critical and should be further explored.

We speculate that when participation is voluntary, it is more likely that group members come to the table in a spirit of openness that enables them to listen well to others' points of view and to question their own frames of reference in a nondefensive way. In our study, voluntariness is confounded with setting. We suggest further research--that studies be conducted in workplace settings when participation is voluntary, and inquiry group settings when participation is required.

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