Learning Teams:

A communities-of-practice approach to collaborative

course design in higher education

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Abstract

Learning teams are designed to help professors handle the increased complexity of university teaching. They provide an opportunity for deliberation on course decisions with a strategic group of people. This paper synthesizes research on a learning team that met for one year to update a core faculty development workshop on Course Design and Teaching. Grounded theory analysis of interviews with participants produced a conceptual framework for learning teams. What really happened? A WebCT environment now houses a living record of the CDT workshop. People in the Libraries are cued to how they can best inform the course design process. Team members have a deepened awareness and shared commitment to interdisciplinary collaboration. In concentrating on achieving explicit goals, however, the team failed to reflect on their own learning. Focusing attention on faculty learning through dialogue and other learning team concepts provides a framework for moving forward on this research agenda.

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"Imagine having carte blanche, as many resources as needed to improve the academy, would you propose learning teams?" asked my Ph.D. advisor. "Forget about tradition", he said. "What does faculty development need to look like? What does course design need to look like? What models really work and why? What would you do? In what ways would you involve senior administration and department chairs in the process?" Answers to these questions converge with main findings from research on learning teams to suggest a new strategy for collaboration in higher education.

Background

Success or failure in teaching and learning is often associated with the level of expertise in individual faculty or motivation and abilities in students. Rarely do departments or the university as a whole share responsibility (Biggs, 2001). A potential gateway to change is learning teams, an abridged title for learning-oriented course design teams (McAlpine, 2002). The concept of learning teams was originally conceived as part of an ambitious proposal to establish a triumvirate at the university level in support of student learning, presented in January 2002 to McGill University's Vice President Academic and Vice Provost Information Systems Technology. The three areas of faculty development, instructional technology, and the libraries all report to this man. There was a shared vision of learning teams that took time developing in conversation with him.

The rationale for learning teams is that so many factors influence university teaching today multiple kinds of expertise and experience are required to make good instructional decisions. For example, an unprecedented renewal of teaching staff over the next ten years requires a long-term commitment to new faculty so they can become effective teachers quickly (McAlpine, 2002a). A commitment to using technology in and out of the classroom to enhance the learning process requires a huge concerted effort in teaching faculty how to use technology effectively (Bates, 2001). An explosion in the amount of information to be navigated using computer technology requires a proactive approach to developing information-literate web-users (Burge, 2000). An influx of students with greater diversity of experience, ethnicity, expectations, and preparedness requires universities to be ready to meet the learning needs they bring with them (Shapiro & Levine, 1999). Learning teams thus provide an opportunity for professors to

deliberate on course decisions with a strategic group of people – pedagogical experts, instructional technologists, librarians, and students - with a view to extending our knowledge about how students learn best.

A central tenet of the learning team concept is Shulman's (1993) notion of teaching as community property, that is seeing the enhancement of student learning as a responsibility shared by everyone in the university. It is not just faculty who are learning but all team members and this adds an important organizational development aspect. A fundamental assumption of the learning team strategy is that individual (and organizational development) best emerges through conversation and information exchange as people work on specific projects in collaboration with their colleagues. This assumption combines the concepts of experience (Dewey, 1997), interaction (Vygotsky, 1978), and context (Lave & Wenger, 1991) into what is known as situated learning. Situated learning, also known as work-based learning, is a view of learning that emphasizes the connection between individuals and their communities of practice, making it distinct from other learning theories that focus on instructional settings (Fenwick, 2001). The original concept of communities of practice developed by Lave and Wenger is a useful description of situated learning patterns not a prescription: "Wenger's work is a provocative ideal to achieve and useful as a tool for dialogue … it is not a recipe for construction of such phenomena" (Schwen & Hara, 2004, p. 163). Research on learning teams can be similarly critiqued.

About the study

The research context was the Centre for University Teaching and Learning[1] (CUTL) at McGill University, a research-intensive university in Montreal, Canada. McGill employs about 1,300 full-time professors who are expected to maintain strong teaching dossiers, even beyond tenure. Like many Canadian universities, McGill is entering a new era of renewal of its professoriate, expecting to recruit about 100 new faculty members per year over the next ten years. It is investing considerably in an integrated approach to faculty development.

The opportunity arose for exploration of a learning team at the alpha level of implementation that is "under the control of the advocate" and "under ideal supportive conditions" (Brown, 1992, p. 172). Internal funding was provided to increase access to the CUTL's flagship workshop on Course Design and Teaching (CDT). This workshop has been successfully offered once a year over the past ten years, with over 200 professors having participated. The workshop is a five-day intensive experience that provides a framework for helping professors think intentionally about their instructional decisions (Saroyan & Amunsden,

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[1]Renamed Teaching and Learning Services.

2004). A major challenge in the workshop over the years has been how to model and make explicit issues around the role of technology in instruction. Technology integration at McGill is driven by a clear vision of the University as a bi-modal environment, this means students will continue to be taught on campus with technology used to enhance both in-class and out-of-class learning. Redesign of the CDT workshop with this vision in mind presented an opportunity for CUTL to collaborate with the instructional technology unit and the libraries and thus experiment formally with the learning team concept.

Research was guided by the following main questions: What makes a learning team, a learning team? What is happening? What are people doing? What changes occur over time? A detailed description and interpretation of participant responses is the content of my Ph.D. thesis (in progress). This paper synthesizes main findings from this research.

Using grounded theory methodology, analysis proceeded through an initial searching phase of interview data looking for variation in perspectives and dominant themes; followed by focused coding and the seeking of patterns. Findings were validated through triangulation of different data sources (interviews, observations, documents, products) and two credibility checks (one with a colloquium of the learning team and another with an external consultant). Only what has been validated with participants is cited with perspectives identified.[2] Literature is integrated as a source of comparison with emerging themes, issues, and questions. In this way, the data is raised to an abstract level of conceptualization to identify an underlying pattern that both resolves the main concern of participants and explains the phenomenon of study (Glaser, 1998).

A conceptual framework of learning teams

My portrayal of the learning team experience has also taken what Bernard Lonergan (1974) defines as rational self-consciousness, the drive not only to understand but to understand correctly, to deliberate on what is true, what is real, what is worthwhile? Another aspect of Lonergan's thinking is the importance of trusting the person making such judgments. In developing an understanding of learning teams, I have considered how each participant's rendition of their experience influenced my own understanding. I tried many core concepts on for size but none fit as well as the phrase "a systematic way of talking to each other" and seven related concepts: negotiation at all levels, shared goals, multiple perspectives, dialogue, iterative design process, collective self-reflection, and momentum. This conceptual framework for the learning team strategy is discussed one concept at a time and pulled together into a visual representation in the Appendix.

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[2] Team Leader [TL]; Coordinator [C]; Graduate Student [S]; Science Professor [P]; Technology Consultant [TC]; Librarian [L]; Faculty Developer participating by teleconference from Simon Fraser University [FD].

A systematic way of talking to each other

In a model of interdisciplinary learning and performance, Segalowitz (2005) proposes "a systematic way of talking to each other" as one of eight conditions in fostering professional awareness of a system as a whole. This same condition is identified as the core concept of the learning team phenomenon and the main concern of participants.

The learning team vision is for the areas of faculty development, instructional technology, and the libraries to work together more effectively in support of faculty and student learning. From the advocate's perspective: "It's about pulling together not just different expertise but expertise across units ... it brings together people from units who normally would never talk to each other." [TL] Team members from outside CUTL voiced a similar concern for collaboration: "There has to be an intermediary from the disciplines, not just for credibility but to build bridges." [P] "You need an interface … people who really understands the technology deeply but at the same time really understands the pedagogy." [TC] "In much the same way [the technology consultant] is necessary but in many ways peripheral, I think that information literacy is necessary but in many ways peripheral. [A representative from the Libraries] should be part of it always as an icon on the screen." [L] Why this sense of urgency to be part of the action?

As mentioned, learning teams are designed to help professors handle the increased complexity of university teaching. Traditionally, this job has fallen under the mandate of people working in faculty development, defined as "specialized staff who work on the boundaries between present practice and best practice; between the current orthodoxy and emergent theory" (Candy, 1996, p. 17). These boundaries are expanding to recognize that faculty development activities are embedded not only in the culture of an institution but also in the context of day-to-day work environments. An institution's culture is influenced among other things by powerful trends in society (such as new technologies and the information explosion; hence the need for a technology "interface" and library "icon" on the learning team). The work context is similarly influenced by powerful disciplinary differences (supporting the need for a "building bridges" to the disciplines). The role of faculty development is not to impose a single vision of the future, "since there may well be differences across the university as to images of the future held by different disciplinary areas, it is necessary to create a forum where cross-disciplinary discussion and dialogue are possible." (p. 12) A learning team is one such forum.

When team members expressed a desire to be part of the action, I do not believe they made a distinction between the CDT workshop and the learning team. The purpose of my research however is to make a distinction. As noted by the team leader when giving feedback on a draft of this paper, the objective of the learning team was to avoid the workshop "fossilizing" by changing and updating it while maintaining the integrity of the original design. I associate this

objective with the notion of lifelong personal and professional learning, a further expansion of faculty development proposed by Candy. If we want professors to become consciously aware of their actions then we have to become consciously aware of the tacit rules and implicit assumptions that guide our own actions. To do so requires stepping outside of our habitual ways of decision-making and getting to know and trust people well enough to change and adjust our practices. We cannot hope to promote change in others if we are not seen as engaging in learning ourselves, and this extends to the university as a whole. Given this imperative for faculty learning through collaboration, the core concept explaining the learning team phenomenon is identified as "a systematic way of talking to each other."

Did the CUTL learning team preserve the integrity of the CDT workshop design while moving forward and integrating powerful new tools and ideas? What happened prior to meetings, in the meetings, and as a result of meetings to demonstrate success or failure? What more could have been done? What elements do I judge as critical to success and therefore would recommend in other settings? These questions are answered as I continue to discuss the conceptual framework for learning teams suggested by my research concept by concept.

Negotiation at all levels

As mentioned, the learning team vision took time developing by the team leader in conversation with senior administrators. Resources were to be made available to compensate for time spent in learning team activities. According to the science professor, who has many years of experience working at McGill, faculty are concerned more about recognition than compensation: "Recognition that working on your course takes time, not just three hours spent in the classroom each week. That's actually what it ought to mean when the University says we value this activity called teaching." [P] He also believes there has to be an individual at the department level able to champion this new approach: "Not only ready to take the challenge but who will be allowed to, in the sense of the department Chair saying, OK Jo, go for it. It's almost political." [P] How do we target the right people and respond to the important variable of time?

In the case of the CUTL learning team, the Leader hand picked members and negotiated time release for those not working in her unit. A Coordinator and graduate student were hired to carefully document decisions taken at team meetings and changes made to the CDT workshop design. Formative evaluation data was collected to monitor participant satisfaction following each major change. There were also two major artifacts developed, a WebCT environment to support the workshop and a resource booklet on information literacy.

In a holistic approach to faculty and staff development at the University of Sydney in Australia, Brew and Boud (1996) emphasize the importance of integrating personal, professional,

and institutional perspectives in work-based learning. "[N]egotiation at all levels has to take place. This is the only way to ensure that activities are grounded in, and take account of, the needs and interests of individuals, faculties, departments, work groups and the institution as a whole." (p. 19) They recommend negotiating learning agreements between professors and department chairs that emphasize specific learning outcomes and portfolio development that documents evidence of achievement. A study of exemplary campuses in the U.S. (judged in part on student-centered, innovative, and egalitarian values) suggests that informal learning (colleague-to-colleague information exchange) is the most powerful experience and motivator for professional development (Kezar, 2005). To encourage participation, empirical data needs disseminating on the benefits of collaborative work versus individual effort.

The learning team strategy needs more than funding; it needs negotiation at all levels. To realize the potential of the learning team strategy will require a change in perspective, from working in a vacuum to collective responsibility in university course design, not as groups of experts but as interdisciplinary teams. When considering transfer to another setting, senior administrators need to be lobbied for recognition of time spent in collaborative course design. Department chairs need to be involved in targeting the right people to engage in major course design projects. Faculty and staff also need to be convinced of the value of collaboration. Documenting and recognizing achievements of learning team activities is highly recommended for this purpose.

Shared goals

As mentioned, the primary goal of the CUTL learning team was to preserve the theoretical integrity of the CDT workshop while exploring the different choices and possibilities instructional technology can afford. A secondary goal was to consider how information literacy might be addressed in the course design process. The rationale behind these two goals was clear to the team leader: "What we're about is trying to change the whole environment for students, because it's not about a particular course or a particular program that creates their experience of learning, it's the whole environment, including all the resources in the University." [TL] Disagreement on priorities emerged, however, during the interview process: "There are a lot of ifs and buts, but a resource, web-based, for a workshop like that … it's almost a no-brainer." [P] From the perspective of the faculty developer participating by teleconference from Simon Fraser University, "the information literacy piece has perhaps got bigger than originally intended, it's not immediately useful to me." [FD]

There was also criticism on the lack of problem solving around larger issues. The graduate student, whose Ph.D. research focuses on disciplinary differences in the scholarship of teaching, feels that discussion in the workshop would be more real if there was a disciplinary

base: "I'd say we would be disciplinary if we talked about the dimensions of the disciplines that people need to look at … and how that may affect the decision-making process … yet we don't teach it that way." [S] From a more pragmatic perspective, the technology consultant is concerned with targeting more people: "The workshop is successful because it's a self-selected group, they're not tackling the professors who don't want to be there … scalability is the real problem and that hasn't been tackled at all." [TC] "One way of using this model in another context is a requirement to be absolutely explicit about the value of the model … I'm not sure in our learning team whether everybody who was involved bought the values or the objectives, some of each, but the whole package, I don't think so." [C]

A basic principle for successful communities of practice is to "focus on value." (Wenger, McDermott, & Snyder, 2001) Because participation is voluntary, value is key. Early value comes from focusing on current issues and needs. As the community grows it becomes important to develop and easily access a systematic body of knowledge. They further recommend encouraging members to be explicit about the value of membership. In a study on great groups, Bennis, a distinguished professor in the U.S. and author on leadership, also found principles common to all. First among these is that "at the heart of every great group is a shared dream" (1997, p. 2). Great groups believe they can change the world. They are on a quest. It is this belief that brings cohesion and energy to their work. The idea in both cases is to create change to the status quo by focusing on shared goals.

The learning team strategy needs to rally around shared goals that embrace basic values inherent in the mission of a university and at the same time address practical teaching and learning challenges, each informing the other. It is further recommended to revisit goals on a regular basis so they can be continuously clarified and re-negotiated.

Multiple perspectives

Learning teams were originally conceived as having multiple perspectives: a faculty developer with pedagogical expertise; a professor(s) who is the focus of the design project; a student(s) from the relevant discipline to provide feedback; a technology consultant to coordinate development of materials; and a librarian or library technician to help define appropriate resources (McAlpine & Saroyan, 2004). A role not defined in the original learning team proposal was that of the coordinator. Participants agree that the coordinator role is key and that roles have different functions and these functions should be distributed across the team. During the learning team colloquium, the librarian who is a senior faculty member at McGill but new to faculty development, observed: "The leader and coordinator are one kind of role, expertise one kind of role, and perspectives another kind of role. … The disciplinary perspective and the student perspective always draw it back to the concrete and I think that is their function. … It's not that

this is one person's only role, but if you leave it out of your model it may get left out of somebody else's practice" [L]

Another key principle for successful communities of practice is to "invite different levels of participation" (Wenger et al., 2001). People participate for different reasons and these different motivations lead to different levels of participation. The "coordinator" organizes events and connects members. A "core group" actively participates in discussions, takes on projects, identifies topics, and moves the learning agenda along. An "active group" attends meetings and participates occasionally without the same intensity as the core. A "peripheral group" rarely participates. A further group of "outsiders" take an intellectual interest in the community. To realize growth in competence, it is important to encourage movement between these different levels, for example, create opportunities for active members to take on limited leadership roles as the focus shifts to their areas of interest and expertise. An additional mechanism for ensuring learning and new insights is for someone on the team (or a subgroup of the team) to consciously undertake the role of bringing different perspectives together. Minnis and John-Steiner (2005) call this a " bridge role."

To realize their potential, learning teams need a commitment to multiple perspectives and distributed roles, in particular the coordinator and bridge roles.
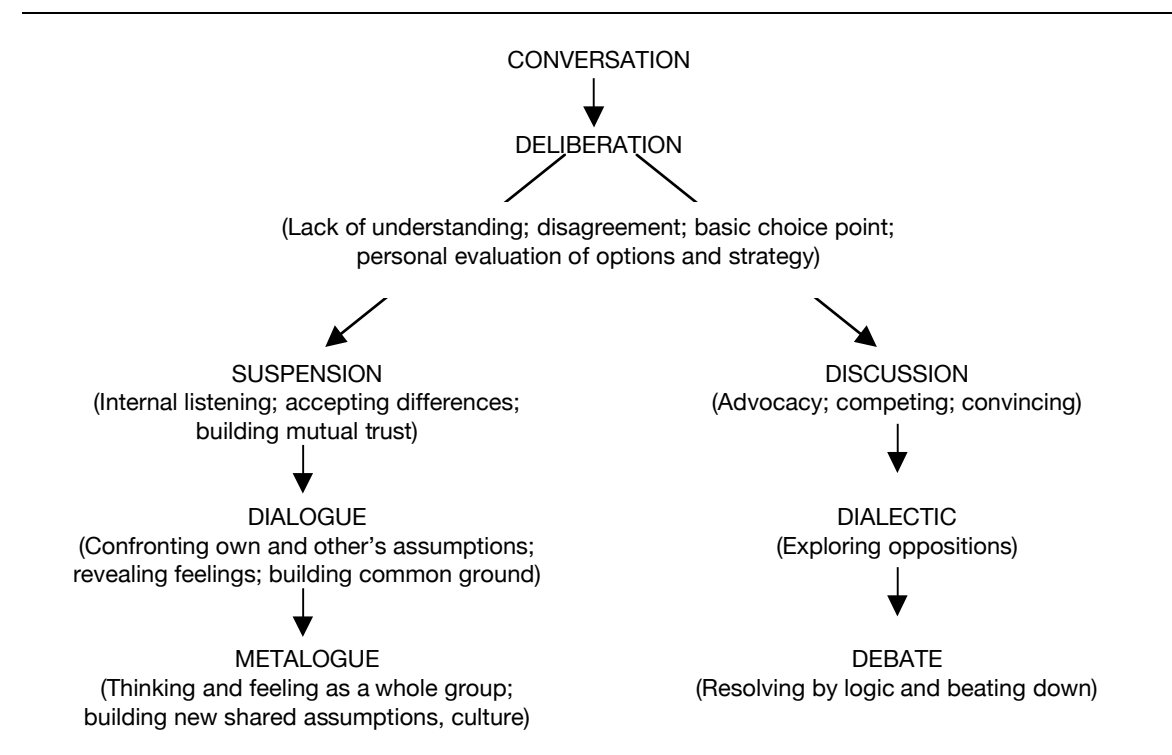
Dialogue

Another strategy for bridging the gap between perspectives is the use of metaphor. Somebody also needs to check for contradictions otherwise decisions will remain at the level of common sense. (Petrie, 1976) Similar observations were made on the process of interaction and inquiry in the learning team by the Coordinator who, although new to McGill, has many years of experience in university administration and the development of distance education courses: "There's an interaction of multiple worlds here … multiple disciplines, multiple levels of experience. … None of these words captures it because there's a little bang at the center. … It's more than synergy because synergy is good. It's not all good. Some of it is difficult. … This collision needs to be nurtured. I need a better metaphor but the conflict is necessary to understand the multiple perspectives." [C]

Delving deeper into the skills of leading and participating in learning conversations, Schein (1993) makes a distinction between dialogue and discussion. Visually depicted in Figure 1, the essential difference in these two ways of talking together lies in confronting one's own and others' assumptions and feelings as a way to building common understanding and promoting individual and collective learning. The point Schein makes is that for people to meet the challenge of collaboration in an organization they must understand differences in sub-cultures

and this requires dialogue. Choosing the path of dialogue involves suspending our reactions: "to let the issue – our perceptions, our feelings, our judgments, and our impulses – rest for a while in a state of suspension to see what will come up from ourselves and from others" (p. 46). We neither voice our reactions or let the matter go but rather listen to what others have to say and, more importantly, listen to ourselves. In this way, "we do not convince each other, but build a common experience base that allows us to learn collectively" (p. 47). We need to get in touch with how our hidden assumptions and categories of thought color our communication in order to see the bias and subtleties of how others think and express meaning.

Figure 1: Ways of Talking Together
(Schein, 1993, p. 46, based on Isaac's model, 1993)

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                              CONVERSATION
                                   |
                                   v
                              DELIBERATION

              (Lack of understanding; disagreement; basic choice point;
                       personal evaluation of options and strategy)


          SUSPENSION                              DISCUSSION
(Internal listening; accepting differences;   (Advocacy; competing; convincing)
          building mutual trust)

          DIALOGUE                               DIALECTIC
(Confronting own and other's assumptions;      (Exploring oppositions)
 revealing feelings; building common ground)

          METALOGUE                              DEBATE
(Thinking and feeling as a whole group;    (Resolving by logic and beating down)
 building new shared assumptions, culture)
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Learning team leaders and participants need to pay special attention to the conditions necessary for meaningful dialogue. These conditions include welcoming conflict, building mutual trust, confronting assumptions, sharing feelings, and creating a common language and framework for dialogue. But most importantly it takes dialogue over time to move people to think deeply and to change their habitual modes of practice.

Iterative design process

The learning team process was variously defined as an advisory board, a consulting group, a discussion group, and an iterative design process replicating the CUTL framework (at the center of the learning team model). The learning team met for one year, generating and reflecting on the results of three design iterations. In software development, there is a sense of completion after three design iterations because management overheads required for more is believed to cancel out the benefit. (Braude, 2001) This same logic was applied to the learning team. The technology consultant, who is himself a Ph.D. student in education, admits a feeling of disappointment: "Unless you're integrating [technology] into your design nobody is going to use it. … It's the difference between restructuring and reengineering. … Reengineering means you go to ground zero and you rebuild. … Redesign means you sit down and look at the objectives and look at the whole sequence of everything that's going on, the format, how it's being integrated, everything from start to finish. We didn't do any of that." [TC] The graduate student agrees: "[The WebCT environment] is a repository of information … more like a toolkit for [participants] than an instructional device. It's more supporting than leading their learning." [S]

Another way of viewing the learning team process is through the lens of design research methodology. For example, at the Columbia Center for New Media Teaching and Learning (accessed online) partnerships are built with faculty around course design projects with a view to bridging the divide between theory-oriented educational research and service-oriented technical support. Summarized in the phrase "build to learn", practice and theory are combined through purposeful project development and inquiry into how best to teach and learn with technology. The final stage in this iterative design process is communication of new pedagogical understanding. In some respects my Ph.D. research serves this purpose, but the question is whether the learning team strategy requires a research agenda to achieve its vision of extending our knowledge about how students learn best. An alternative would be for case studies to be posted in an informal online learning environment. For example, under the rubric of the scholarship of teaching and learning, the Carnegie Foundation's Knowledge Media Laboratory [available online: (http://www.carnegiefoundation.org/programs/index.asp?key=38] encourages professors to write about their course design projects, the tools developed and feedback received, in the context of their own disciplines and pedagogical assumptions.

Dialogue in the learning team needs to unfold through an iterative design process that may or may not involve rigorous research with the CUTL design framework clearly at the center. This will require revisiting instructional decisions and gearing tool building projects towards the modeling and mentoring of shared goals, for example, the student-centered, innovative, and egalitarian values of exemplary campuses.

Collective self-reflection

A further aspect to dialogue depicted in Figure 1 is the need for both individual learning and thinking and feeling as a whole group. Learning team members also observed different kinds of learning outcomes and the need for more structure: "The learning team experience informed my practice but this was a very personal responsibility. … It would be very easy just to attend those meetings and then do nothing about it, or just attend the meetings and not even share your thinking. That's where there may be need for more structure." [S] "We're trying to do two things in the learning team … one is an intellectual endeavor to create a more seamless way of thinking about instruction in terms of student learning, and the other is to have a coherent way of collaborating and making sure that everyone understands all the resources." [TL] "What the learning team does is build in reflection … multiple layers of not just thinking but doing. … As a group we learned the implications of planning decisions on the CDT workshop, a systemic view." [C] "The sum of me with somebody from CUTL working with a professor with some question of course design or curriculum development is almost certainly more powerful than them alone or me alone." [P] "It's the synergy of the [professor] and the librarian that is going to make this little aspect of information literacy work." [L]

Pacanowsky's (1995) research on teams suggests "the upside of working together (integration) might be a sense of synergy and having everyone on the same page", whereas on the downside, "working together all of the time can include group think and a limited ability to experiment." (p. 45) A key to efficient and effective teams is reflection on team process, learning from this reflection, and changing processes as needed. Learning teams can be further explained by Eraut's (2005) typology of informal learning. In this typology the variable of time is used to distinguish between implicit, reactive, and deliberative learning. This distinction between reactive vs. deeper levels of learning is captured visually by Senge and colleagues in Figure 2.

There is a new movement in higher education towards interdisciplinary collaboration. The main premise is that "much of faculty work can be understood as learning" (Lattuca & Creamer, 2005, p.9). This view of learning "involves coming to know something familiar in different ways, or to know something altogether new, from within one's self and often with others" (Neumann, 2005, p. 65). It positions interdisciplinary collaboration not only as the subject of learning but also as a problem. When formulated as a problem, interdisciplinary collaboration may be supported and pedagogically framed to intensify learning. Neumann's point is that faculty learning, if encouraged, may touch deeply the learning of students.
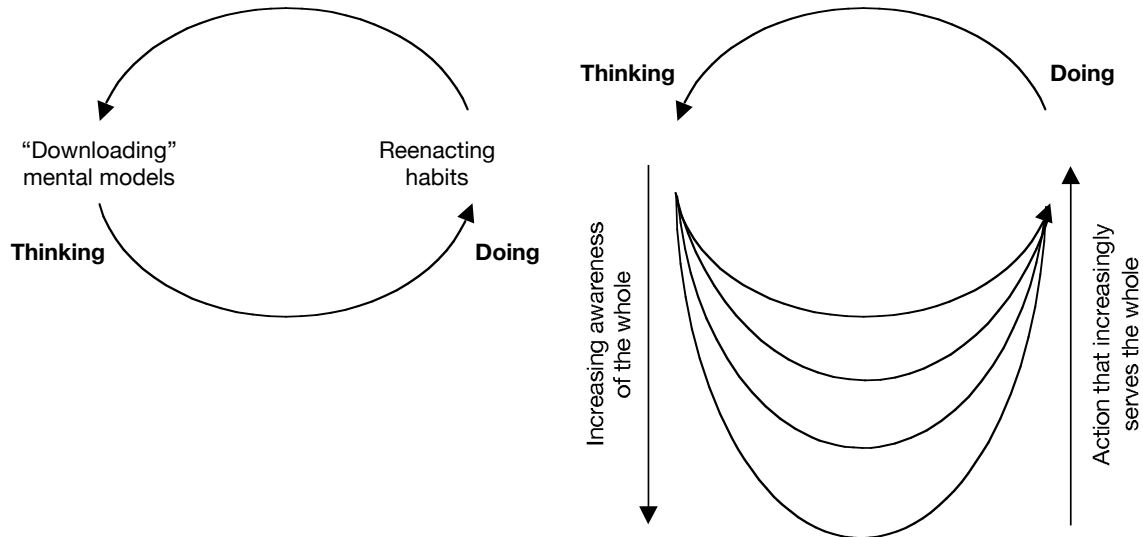
Figure 3: Reactive vs. Deeper Levels of Learning
(Senge, Scharmer, Jaworski & Flowers, 2004)

Building collaboration through the learning team strategy is better understood as a priority worthy of future research and practice. Focusing attention on collective self-reflection, team process, and multiple layers of thinking (awareness of the whole) and doing (action that serves the whole), as well as other learning team concepts, can provide a framework for moving forward on this research agenda.

Momentum

Insights from studies that focus on building faculty learning communities mention the need to respect demanding time commitments more than anything else while engaging participants in a sense of community and shared vision. "We found it is important for maintaining momentum and long-term success that the funded projects are authentic campus projects rather than new work created on top of other workloads" (Hansen & others, 2004, p. 76). There is also need for a passionate facilitator and a formative process that demonstrates impact on faculty learning and practice.

The quality of momentum and variable of time are both echoed in interviews with participants in the learning team: "Not everybody is going to want to engage in a learning team in a formal way. … The idea is not to let the momentum die. Keep moving with it and keep cultivating people as a group. [FD] "The majority of the clientele coming to the workshop now are new professors. … What they need is a constructive endeavor where they take something for one day and then work on it for the rest of the month, follow-up with another session, and have it on a more continuous basis where they can link their work with their learning a lot more." [S]

The learning team strategy has the same final challenge. Like communities of practice, learning teams need to create a rhythm. Regular meetings, website activity, informal lunches all provide a sense of movement and liveliness. If movement is too fast people are overwhelmed, if too slow they become sluggish. A mix is needed of idea-sharing forums and tool building projects; casual conversation and directed action. Sustaining momentum in the learning team requires cultivating people as a group and authentic campus projects.

What next?

Although it can be argued that learning teams are similar to what takes place under the icon of collegiality, this strategy is different from the way course design and faculty development is traditionally conceived. Learning teams represent a collaborative framework for linking people to communities of practice; crossing boundaries we may not even know exist, with a view to extending our knowledge about how students learn best. To realize the potential of the learning team strategy will require a change in perspective, from working in a vacuum to collective responsibility in university course design, not as groups of experts but as interdisciplinary teams.

This study was of a period of externalization in a community of practice when members subjected their beliefs and activities to critique and reflection. They broke out of their own boxes, enabling them to learn new things and experience a new form of collaborative practice. In concentrating on achieving explicit goals, however, the team failed to reflect on their own learning that occurred as they met the challenge of collaboration. My research study served this purpose to a degree, but only after the fact not during the act. Many practical questions remain. Who needs the learning team strategy? How do we identify these people? Should it be voluntary? Should it be by conscription? Who should we target?

My Ph.D. advisor also asks: "Do you think this learning team approach is the precursor of a different culture?" What would be very powerful for me, I said, is if professors looked at their course outlines together and saw how they overlapped, not only the content but the methods used to teach and the impact of those on students, so that in the students' head we would create an integrated whole. I will always remember his enthusiasm: "So now you're talking about a learning team approach not with individual faculty but with a department that might be the next step to creating a culture of collaboration and situated learning within a department, within a Faculty, within the University." Yes, this is the learning team vision.
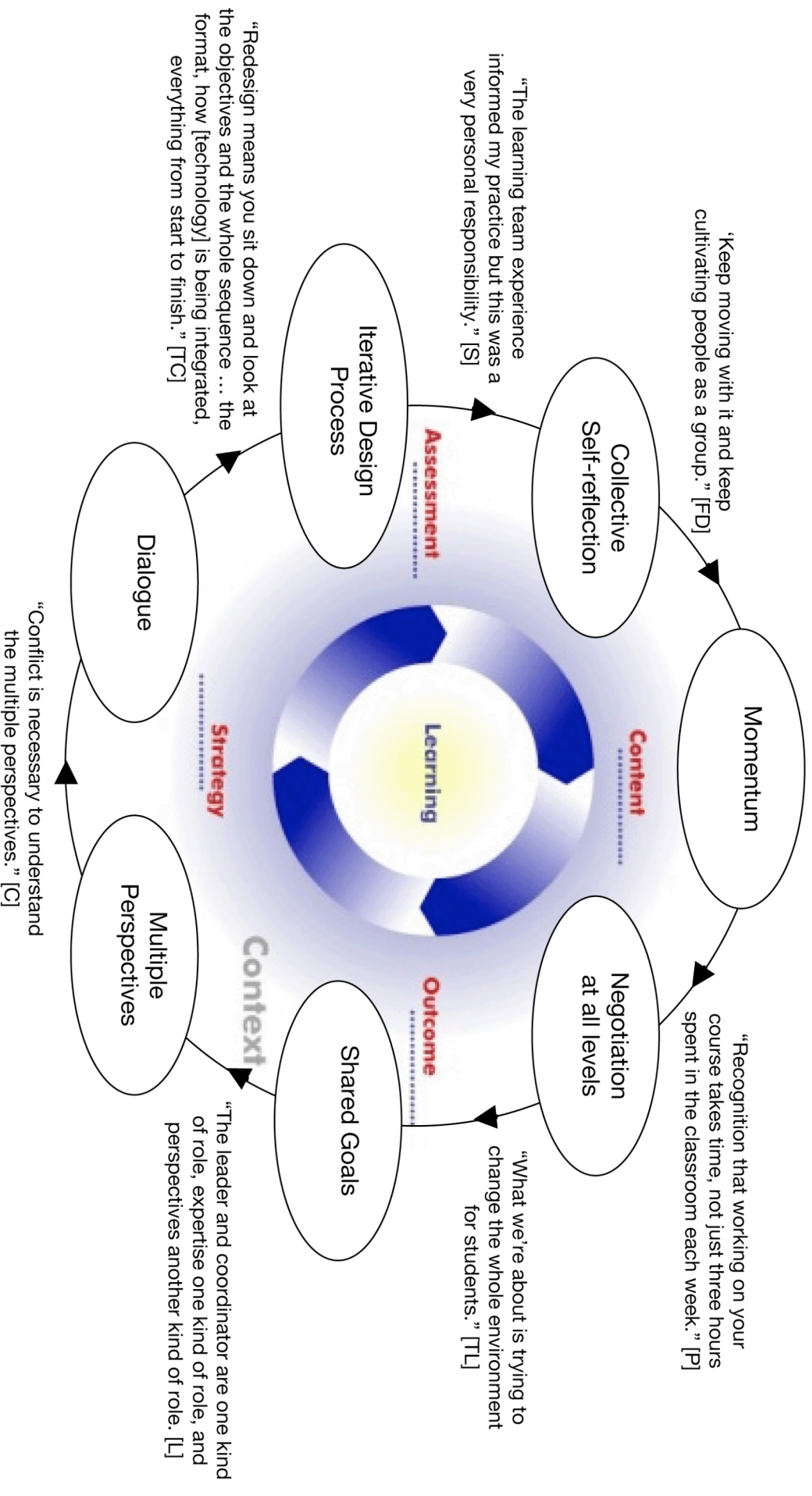
Bibliography

Bennis, W. (1997). The secrets of great groups. *Leader to Leader.* No. 3. [Available online: http://www.druckerfoundation.org/leaderbooks/L2L/winter97/bennis.html]

Bereiter, C. (2002). Design research for sustained innovation. *Cognitive Studies, Bulletin of the Japanese Cognitive Science Society. 9*(3), 321-327.

Brew, A. & Boud, D. (1996). Preparing for new academic roles: An holistic approach to development. *International Journal for Academic Development. 1*(2), 17-25.

Braude, E.J. (2001). *Software engineering: An object-oriented perspective.* NY: John Wiley & Sons Inc.

Brown, A.L. (1992). Design experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *The Journal of the Learning Sciences. 2*(2), 141-178.

Candy, P. (1996). Promoting lifelong learning: Academic developers and the university as a learning organization. *International Journal for Academic Development. 1*(1), 7-19.

Columbia Centre for New Media in Teaching and Learning. *Design research methodology.* [Available online: http://ccnmtl.columbia.edu/dr/page_methdology.html] Last accessed March 3, 2006.

Dewey, J. (1939). *Education and Experience.* New York: Collier Books.

Engeström, Y., Engeström, R. & Kerosuo, H. (2003). The discursive construction of collaborative care. *Applied Linguistics, 24*(3): 286-315.

Eraut, M. (2005). Informal learning in the workplace. *Studies in Continuing Education. 6*(2), 247-273.

Fenwick, T.J. (2001). *Experiential learning: A theoretical critique from five perspectives.* Center for Education and Training for Employment. [Available online: http://ericacve.org/fenwick_01.asp.]

Glaser, B.G. (1998). *Doing grounded theory: Issues and discussions.* CA: Sociology Press.

Kezar, A. (2005). Moving from I to We: Reorganizing for collaboration in higher education. *Change,* November/December, 50-57.

Lave J. & Wenger, E. (1991). *Situated learning - legitimate peripheral participation.* Cambridge: Cambridge University Press.

Lonergan, B. (1974). The Subject. In: *A second collection: Papers by Bernard J.F. Lonergan.* Ryan, W.F.J. & Tyrrell, B.J. (Eds.). London: Durton, Layman & Todd.

McAlpine, L. (2002a). *Supporting faculty and students in a changing environment: A new vision for leadership on teaching and learning.* Internal document.

McAlpine, L. (2002b). *Criteria for creating a learning team.* Internal document.

Mezirow, J. (1991). *Transformative dimensions of adult learning.* San Francisco: Jossey-Bass.

Pacanowsky, M. (1995). Team tools for wicked problems. *Organizational dynamics,* Winter.

Petrie, H.G. (1996). Do you see what I see? The epistemology of interdisciplinary inquiry. *Journal of Aesthetic Education. 10,* 29-43.

Ramsden, P. (1992). *Learning to teach in higher education.* London: Routledge.

Saroyan, A. & Amundsen, C. (Eds.) (2004). *Rethinking teaching in higher education.* USA: Stylus Publishing, LLC.

Schön, D.A. (1983). *The reflective practitioner: How professionals think in action.* London: Temple Smith.

Schwen, T.M. & Hara, N. (2004). Community of practice: A metaphor for online design? In: Barab, S.A., Kling, B. & Gray, J.H. (Eds.) *Designing for virtual communities in the service of learning.* U.K.: Cambridge University Press.

Segalowitz, N. (2005). Toward a model of the interdisciplinary nature of learning and Performance. Presentation at Concordia University's Centre for the Study of Learning & Performance seminar series: *"Looks Like a Duck, Talks like a Duck, Must be a Duck."* January 28, 2005.

Shulman, L. (1993). Teaching as community property: Putting an end to pedagogical solitude. *Change* (November/December), 6-7.

Vygotsky, L. S. (1978). *Mind in society - the development of higher psychological processes.* Cambridge: Harvard University Press.

Wenger, E., McDermott, R., & Snyder, W. (2001). *Cultivating Communities of Practice: A Guide to Managing Knowledge.* Boston: Harvard Business School Press.

APPENDIX A: CONCEPTUAL FRAMEWORK OF LEARNING TEAMS

'Keep moving with it and keep cultivating people as a group.' [FD]

"The learning team experience informed my practice but this was a very personal responsibility." [S]

"Recognition that working on your course takes time, not just three hours spent in the classroom each week." [P]

"Redesign means you sit down and look at the objectives and the whole sequence … the format, how [technology] is being integrated, everything from start to finish." [TC]

"What we're about is trying to change the whole environment for students." [TL]

"Conflict is necessary to understand the multiple perspectives." [C]

"The leader and coordinator are one kind of role, expertise one kind of role, and perspectives another kind of role. [L]

Diagram nodes: Iterative Design Process, Collective Self-reflection, Momentum, Negotiation at all levels, Shared Goals, Multiple Perspectives, Dialogue. Center: Learning. Labels: Assessment, Content, Outcome, Context, Strategy.

Negotiation at all levels	*Shared Goals*	*Multiple Perspectives*	*Dialogue*	*Iterative Design Process*	*Collective Self-reflection*	*Momentum*
Recognition of time	Focus on value	Commitment	Welcoming conflict	CUTL framework	Reflection on team process	Cultivate people as a group
Department champion	Balance basic values and practical issues	Distributed roles	Mutual trust	Tool building focus	Multiple layers of thinking and doing	Data on collaboration vs. individual effort
Explicit about value	Revisit regularly	Coordinator and bridge roles key	Creating a common language	Shared values		
Documentation				Communication plan		