# Transformative Learning in a Faculty Professional Development Context

Cheryl Whitelaw, Evaluation Research Consultant, Academic Technologies for Learning

Myrna Sears, Evaluation Research Consultant, Academic Technologies for Learning

Katy Campbell, Director, Research and Policy, Academic Technologies for Learning

University of Alberta

Academic Technologies for Learning

TELUS Centre for Professional Development

87 Avenue & 111 Street

Edmonton, AB

T6G 2R1

Fax: (780) 492-8200

Cheryl Whitelaw, MEd

Cheryl.whitelaw@ualberta.ca

(780) 492-0023

Myrna Sears, MDE

Myrna.sears@ualberta.ca

(780) 492-6332

Katy Campbell, PhD

Katy.Campbell@ualberta.ca

(780) 492-3655

Abstract

This paper considers transformative learning within the context of the Partnership Program, an instructional development initiative of the Academic Technologies for Learning (ATL) unit at the University of Alberta. This initiative focused on several outcomes including introducing faculty to technology-enhanced teaching and learning strategies and tools, developing educational resources through a collaborative instructional development process and promoting faculty use of educational technologies within the university, but also supporting faculty to change their teaching practice through participation in an instructional development project. One question asked in this study is: Does the involvement of faculty members in an instructional development project facilitate a transformation in their teaching philosophy and practice? This paper will review transformative learning discourse, with a particular focus on three themes that emerged from the study and how they may relate to the presence or lack of transformative learning experiences for faculty participating in instructional development projects.

This paper considers the experience of faculty members and instructional development staff within the context of the Partnership Program, a five-year instructional development initiative of the Academic Technologies for Learning (ATL) unit at the University of Alberta. At its inception several outcomes were pursued across this program including 1) introducing faculty to technology-enhanced teaching strategies and tools, 2) creating technology-enhanced educational resources through a collaborative development process, and 3) promoting faculty use of technologies. However, as the Partnership evolved, the program also supported faculty to change their teaching practice through active participation in an instructional development project. One of the questions asked in a study that examined this program was: Does faculty members' involvement in an instructional development project facilitate a transformation in their teaching philosophy and practice?

*The Partnership Program*

Rogoff (1990) argues that participation in learning hinges on communication between people in a group, in terms of shared understanding or shared thinking. Glaser (1991), Tergan (1997), Ewing and his colleagues (1998), and others (cf. Jonassen, Dyer, Peters, Robinson, Harvey, King, & Loughner, 1997; Kanuka & Anderson, 1998) believe that learning is most effective if it is embedded in social experience, and if it is situated in authentic problem-solving contexts entailing cognitive demands relevant for coping with real life situations occurring through social intercourse. The instructional design process,

in which faculty, designers, and others develop new ideas and understandings, may be a form of collaborative learning.

From 1996 to 2001 ATL introduced individual faculty members to a range of teaching and learning technologies through the Partnership Program. The launch of the Partnership Program was intended to provide an immersion experience for faculty members who were redeveloping a course.  Course release was awarded to faculty members through a competitive proposal process. Most prospective Partners were domain experts without experience in developing instructional plans that included questions about intended learning outcomes, student learning needs and characteristics, and authentic assessment practices.

The Partners resided in a centralized production facility (the Studio) to work on their instructional development projects and learn about tools, course design, pedagogical models, and evaluation. The Partner was assigned a workstation and worked intensively with an instructional designer and a technical production team in which he/she was expected to participate as a full member of the course development team.  Once accepted, faculty also developed a professional development plan that might include reading, tutorials, hands-on workshops, group seminars, and other learning activities.  ATL staff members included instructional designers, and specialists such as a graphic artist, a Web developer, a video expert, a distance delivery expert, etc. During its lifespan, the Partnership Program directly supported approximately 48 faculty members.

Several Partnership projects were extended by an infusion of provincial government resources through the Learning Enhancement Envelope (LEE), a four-year funding initiative.  LEE-funded projects received support in the range of $50,000 -

$100,000 on a competitive basis with annual calls for proposals. This funding envelope was intended to support individual projects aligned with university-wide technology integration plans. During the LEE years ATL expanded its services and staff.  One effect of this expansion was more emphasis on the production of educational resources than faculty learning and development.

Transformative Learning

ATL's mission is to foster innovation in teaching and learning, involving faculty members in a process of change and potentially, transformation, in the ways they plan, teach and interact with learners.  Few faculty are expert in the theoretical underpinnings of pedagogy in general, and the pedagogy of online environments in particular, nor are institutions in a position to support them in large-scale, technology-based curriculum development. One solution to this problem of resources and reorientation involves the creation of support units through which instructional developers work directly with faculty to develop online learning environments and, through that process, involve faculty in a process of personal and professional development (Bates, 2000). We believe that faculty working along with instructional developers on educational development projects is a potential opportunity for transformation with implications for faculty as learners and the quality of student learning experiences.

What do we mean by transformative learning for faculty and their teaching philosophy and practice?  According to Mezirow (2000), learning occurs in one or more of the following four ways, by

1)  elaborating existing frames of reference;

2)  learning new frames of reference;

3)  transforming points of view; or

4)  transforming habits of mind .

Mezirow's theory of perspective transformative learning can be summarized as a process of acquiring new knowledge during which adult learners critically examine their core beliefs, assumptions, and values. This critically reflective process may lead to a foundational reframing of one's understanding and subsequent actions that alter the adult learner's "frame of reference and perspective of circumstances, issues, and actions" (King, 1999, p. 3). As transformative learners, adults "question their perspectives, open up new ways of looking at their practice, revise their views, and act based on new perspectives" (Sokol & Cranton, 1998, p. 3).  Within an educational context, the opportunity to engage in a personal, "hands-on" experience of course development may be influential in this process, in which a combination of critical dialogue and practice is key (Chin & Horton, 1994; Wilhite, DeCosmo & Lawler, 1996). In this study, our definition of transformative learning focuses on the faculty members' transformation in their role as an instructor and their core beliefs about teaching and learning.

*Critical Reflection*

Cranton (1996) positions critical reflection as the central process in transformative learning, leading toward a "more inclusive, differentiated, permeable, and integrated perspective" (p. 52). She believes that, if educators are to develop their practice, a process including both personal and professional growth, " development requires moving beyond the acquisition of new knowledge and understanding into questioning our existing assumptions, values, and perspectives" (Cranton, 1996, p. 76, original emphasis).

Kegan (2000) argues that a transformation can occur when a person undergoes a process of questioning personal assumptions, regardless of the outcomes in terms of changes in practice. He argues that individuals are triggered and transformed by complexities prompting a critically reflective process that moves their unquestioned acceptance of assumptions from an external authority to an internal authority.

> Their present difficulties arise because the complexity of the 'life curriculum'
> they face has gotten qualitatively more challenging…what they face are not
> technical challenges (the sort that can be addressed by what I call "informational
> learning"), but adaptive challenges, the kind that require not merely knowing
> more but knowing differently. For this reason they are in need of supports to
> transformational learning" (p. 65).

Some educators tend to view their development of practice as an improvement of technique or skills, developing their craft of teaching (Cranton, 1996). This craft orientation may, however, lead away from an evolving reflection on teaching practice toward a reinforced defense of existing techniques and knowledge. Schön (1983)

acknowledges this dilemma of expert knowledge-in-practice as one that prevents critical reflection because, "uncertainty is a threat; its admission is a sign of weakness" (p. 69). The incorporation of instructional technology into teaching practice increases complexity in an already complex environment and introduces a realm of expertise apart from the subject matter; conditions which transformative learning theory suggest can trigger a transformative learning experience.

*Context and Practice*

Additional transformative learning discourse has included a greater emphasis on context and practice. Taylor (1997) emphasizes the need to recognize the significant influence of context on transformative learning. Whether it is the socio-cultural context of the adult learner or a more holistic affective and situated cognitive context, Taylor suggests a lesser role for critical reflection relative to context than is advanced by Mezirow and Cranton.  Fuller (1999) adds to the discussion of context through his revival of Kurt Lewin's model of reeducation (1945). He notes,  "reeducation means changing basic human behavior patterns and, in that change, changing the *values* (core beliefs) and *valences* (connections and relationships) that make people behave the way they previously did" (p.7). Fuller adds that transformative learning is highly stressful for individuals in that their culture itself resists change.  Later in the article, we will discuss the role of context in the transformational learning outcomes of the Partnership Program.

*Faculty and Action Learning*

Recently workplaces have been described as potential learning communities (c.f. Chawla & Renesch, 1995; Foley, 2001).  As a learning environment, the professional workplace invites critical reflection on practice, and develops processes and systems for professionals to share their insights and learning with others. Under this model the Partner is viewed as a professional who learns through engagement in a development process. Schön (1983, 1987) defines this sort of activity as inquiry in which constructions of the situation are surfaced, juxtaposed, and held against alternative accounts or beliefs, or "seeing the taken-for-granted with new eyes" (Newman, 2000, p. 3).

Newman (2000) cautions that it is difficult for individuals to balance their interpretations with their interpretive community. This perspective focuses attention on contexts for interpretation; contexts that are culturally based and that determine assumptions, values, beliefs, and actions. Participants belonged to several different interpretive communities during their Partnership experience, including that of their discipline, their department and Faculty, and the Studio, all of which were embedded in an institutional culture privileging intellectual autonomy and authority.

Lave and Wenger (1991) have described the process of moving toward full participation in a community as "legitimate peripheral participation".   In this process, newcomers to the community pass through three stages in which they progress 1) from reliance on abstract principles to the use of concrete experiences; 2) from viewing a context analytically to a more holistic perspective; and 3) from observer to fully involved performer (Jarvis, 1999). In this view, interacting with knowledgeable colleagues is a

socialization process that encourages participation in a knowledge community or professional culture. According to Jarvis (1999) faculty who actively problematize their practice keep growing and learning, becoming experts in the community from whom novices in turn may learn. Bringing faculty into the Studio community to work with expert colleagues reflected this model of action-learning, although as we shall see the model in practice had divergent outcomes. Within the Studio community, nurturing activities occurred such as informal lunches and Pizza Fridays, regular workshops with peers, and the Friday Showcase, in which Partners and others presented their ongoing or finished work.

In this paper, the ideas generated from transformative learning discourse, and emerging work on professional learning as action research, provide a theoretical framework to examine faculty members' experiences in an instructional development process. Retrospective accounts of interviewed Partners suggest for a few, the presence and, for most, the lack of a transformative learning experience.

Evaluating the Partnership

As a mandated change agent, ATL has undergone significant changes in strategies and composition to innovate teaching and learning through instructional technologies. Our interest in the potential of instructional development work to facilitate transformation emerges from our collective experiences working with innovation and organizational transformation. The Partnership Program study was intended to examine the experiences of faculty members participating in the program as well as the perspectives of ATL staff

and administrative stakeholders in order to better understand our own practice as facilitators of change within an institutional context.

*Methodology*

       *Participants*.

       All forty-eight Partners were invited to participate in the study. Sixteen Partners (10 females and 6 males) completed the initial survey.  Of this group, most of the participants were over 40 years of age. Eight of the Partners were between the ages of 40 and 49 and seven were over 50 years of age with a remaining participant between thirty to thirty nine years of age.  Of the 16 participants, seven were associate professors, four were full professors, two were assistant professors and two were graduate teaching assistants.  With respect to age and academic rank, these demographics are representative of the ages and academic ranks of the professoriate at the University of Alberta, although the ratio of female to male participants is not.   Nine Partners agreed to participate in semi-structured interviews following the collection of survey data.  In addition, ATL instructional development staff and key administrative stakeholders both internal and external to the unit were interviewed.

       *Data Collection*.

Initially, former and current ATL staff members were interviewed, as well as key stakeholders in leadership positions across campus that were associated with ATL. The semi-structured interviews were transcribed for accuracy, analyzed for common themes, and used to complete a descriptive, historical picture of the Partnership Program. Survey and interview questions for the Partners were derived from this data by a team of researchers. Data was collected next through a survey that included both quantitative and qualitative questions. The survey focused on examining program effectiveness and the impact of the program upon instructor teaching practices. Survey items using a yes or no response format included questions such as whether faculty received course release time and "did ATL meet their expectations during the partnership".  Survey items using a 5 point scale asked questions such as how faculty would rate the usefulness of various kinds of support, e.g. instructional design, web development, evaluation, their comfort level with instructional technologies and designing instruction, the importance of various factors for encouraging further instructional development, e.g. more hardware, software, course release time, etc., and the degree to which faculty changed their pedagogical style during and after the Partnership Program.  Qualitative survey items addressed questions such as project title, description, and initial project goals, an open-ended explanation of the effect of the Partnership Program on faculty's views of teaching, and comments on the instructional design process.  The qualitative data was analyzed using NVivo software and the quantitative data was analyzed using SPSS software.

Finally nine Partners who agreed to participate were interviewed. For consistency and reliability, two researchers conducted all the interviews. During the semi-structured interviews the Partners were asked a series of questions and invited to describe their

project, share their stories, and provide a personal perspective on their Partnership

experiences. NVivo software was used to analyze this data and identify key themes.

Interviews were semi-structured to allow faculty to talk in-depth about what they

found was important in their experiences.  For this paper, primarily qualitative data from

Partner interviews is used.  The qualitative data provides in-depth information about their

self-report (or lack of report) of a transformative learning experience.  The quantitative

data from the survey provides an indication of changes in Partner perspectives both

during and after the Partnership Program, trends within which to situate the qualitative

data from Partner interviews. The low response rate for the survey (16 of 48)

compromised our ability to infer some characteristics across the sample.  In retrospect,

given the staggered participation of Partners across several years of the Program, we

would have more effectively boosted the response rate by requesting the completion of an

exit survey at the point when they left the Program rather than, in some cases, years after

their project was completed.

Data from this study represents Partners self-report of changes and/or

transformations in their teaching beliefs and practices.  Without further research, we

acknowledge that the data can only suggest indications of the occurrence of

transformative learning by Partners.

The multiple methods research approach is designed to explore and describe

Partners' experience in terms of both standardized and phenomenological outcomes for

the Partnership Program with the intent of generating further worthwhile research

questions. The research methodology for the Partnership Program is situated within an

action research paradigm that supports a dual mandate to improve practice and contribute

to knowledge in the area being studied.  The primary priority of the research design was

to assess the effectiveness of the Partnership Program, a model of collaborative

instructional development support that is representative of a boutique model of

instructional development (Bates, 2000).  A secondary priority was to explore possible

occurrences of transformative learning. A significant part of the research design is to

include in the data set information about the research subjects' social and institutional

contexts including their roles, rules, and power (Dahler-Larsen, 2002).  This contextual

description is a necessary part of understanding and/or interpreting study data.  The

quantitative survey items are designed to gather standardized information that can be

used to describe trends across the Partner population. Associated qualitative survey items

are designed to gather more in-depth information.   The open-ended interview questions

were selected to allow research subjects to describe the experiences and aspects of their

contexts that are meaningful for them.

*Analysis*.

Interview data were analyzed by a group of researchers and research assistants for

common themes.  Themes generated from the initial analysis were then re-assessed by 2

researchers using the four ways of learning suggested by Mezirow (2000) (i.e. elaborating

existing frames of reference, learning new frames of reference, transforming points of

view, and transforming habits of mind).  Results of the analysis were then compared

among the researchers and to research literature to suggest possible occurrences of transformative learning.

Findings

Most of the nine Partners interviewed did not report significant or potentially transformative change in their beliefs and practice in terms of pedagogy and the use of instructional technology. Based on our analysis, two Partners out of the nine interviewed (BU and RF)[1] showed some indications of experiencing a transformation in points of view and in habits of mind as well as learning new and elaborating on frames of reference (Mezirow, 2000). Three other Partners (IJ, LA, and HA) showed clear indications of change and some suggestive indications of transformation in either point of view or habits of mind. The remaining four Partners (CL, DG, RU, and LL) showed some indications of change; we agreed, however, that their learning was more accurately characterized as elaborating existing frames of reference or learning new frames of reference. We will discuss our findings through three themes that were identified in our initial assessment of the interview data:

- ➢ Alignment/mis-alignment of expectations with experience,
- ➢ Change in attitudes towards technology-enhanced instruction, and
- ➢ Change in pedagogical style

---

[1] Partners identified through coded ID to protect anonymity.

We selected these themes as they seemed congruent with our collective experiences in collaborative instructional development projects and we wanted to assess the potential for a relationship between them and transformative learning.

*Theme 1: Alignment/Mis-alignment of Expectations with Experience*

In interviews and surveys, participants identified a number of goals they initially had for the Partnership, including:

Instrumental goals such as

➤ designing a multi-media approach to course delivery (e.g. developing a CD-ROM)

➤ developing a website

➤ providing students with basic information literacy skills

Developmental goals such as

➤ pedagogical and technical guidance and technical training

➤ enhancing students' confidence and competence in using computers

➤ enhancing teaching practice

Many participants emphasized instrumental over developmental expectations. They had been released from teaching for a sustained period of time for a specific task –

to develop a course or educational resource.[2] Most of the nine interviewed Partners noted an unforeseen, emergent aspect of their project such as the project taking more time than expected (LA, IJ, AL), unforeseen products (BU), a need for both technology and pedagogical expertise (HA) or changes in their teaching environment that affected the use of the educational product (DG).  We questioned whether the alignment, or more common in our sample of cases, mis-alignment of expectations and experience had implications for Partners' self-report of significant change or potentially transformative experience.

Several Partners commented that their initial expectations changed during the collaborative development process as they progressed through their project. IJ originally intended to provide a framework for a course dealing with sexual decision-making through a branching structure. Through discussions about ill-structured problem spaces (Jonassen and others, 1997) she "came to a different approach where we had a much more open structure…(to get) people to gather information, including information about their own values, and come up with decisions that were right for them".   IJ realized she had begun the Partnership "unconsciously teaching people that there are only two choices in any given situation" and that her initial learning design was " teaching something quite counter to what we wanted to teach."  Collaboratively, IJ and the instructional development team developed a way to encourage problem-solving behavior by demonstrating  "…there's an infinite number of creative solutions to this scenario. You need to take the one that's best for you based on your own values and the correct information, and put those two together".

---

[2] Although three of forty-eight Partners described their project as a research-based project, they did not participate in this study.

RF remembers her initial frustration when her expectations were not met…

> In looking back, I can see that so much of what I initially felt as being
>
> frustrated with the whole thing, was in fact the diamond in the rough
>
> because it turned out to be the most powerful aspect of the whole
>
> experience, and that was having somebody saying, 'Wait a minute. We
>
> have to do some reading here…We have to look at a number of different
>
> possibilities here, and we've got to slow the process down. We're not
>
> going to jump into making the Webpage next weekend!

…and her realization that the design process was helping her make sense of her own beliefs and values:

> Now I look back and think that was the one time in my life,…where I
>
> really stopped and asked myself questions about my own philosophy of
>
> teaching and learning, …which had so many ramifications. Everything
>
> I've done since then, the whole way I teach my undergraduate/graduate
>
> courses is now tied up in asking those big questions and having my
>
> students ask those questions of themselves.

These Partners who self-reported experiencing significant learning, retrospectively recognized the value of working through their pedagogical rationale and

exploring potential applications of instructional technologies to support it. The moment when faculty address the ill structured problem of incorporating instructional technologies into their teaching practice, is the moment when they are likely more open to questioning deeply held personal beliefs that Kegan (2000) asserts is the beginning of change for a learner. Our findings suggest the mis-alignment of expectations and experience is a possible opening to critical inquiry into one's own practice, an opening that can be supported by instructional development staff.

*Theme 2: Change in Attitudes toward Technology-Enhanced Instruction*

Although 5 of 16 survey respondents reported "no attitude change", ten indicated a positive change in attitude toward technology-enhanced instruction with one respondent indicating a negative change. In our view, IJ experienced a potentially transformative change in her attitude towards technology-enhanced instruction because its use actualized her pedagogical values in an unexpected way. IJ described her initial perceptions of technology as being like a "cold, linear structure" which she felt "boxed" her in. "[The instructional designer] helped me to see that there were ways to use the technology that could open it up a lot more. It was one of those very exciting, "aha" kind of moments." Her experience with the technology extended her understanding of how she could impact people as a teacher. "Teacher is the core of my identity…I get really passionate about reaching people and teaching people and having an impact. This project has magnified greatly how I see my potential to have impact." She comments,

I would have to teach for 300 years to reach the number of people that I've

reached through technological means.  And that's mind blowing to me,

because I thought…I might be out there teaching for 40 years, and here

I've already reached as many people in the last 5 as I could with 300 years

of teaching …my vision of what a teacher can do in life has just expanded

tremendously…it's transformed me…

Other Partners indicated no change in their attitudes towards technology-

enhanced instruction. DG noted "I've always had a very practical sense that it's a

tool; still do."  LL "learned about some of the possibilities and the limitations of

online teaching" and felt that the online resources developed were "helpful, useful

and positive."  He remained skeptical of the relevance of online instruction. "Of

course, online you can teach things, informational material. But the more the

material has to do with that 'transformational' knowledge, I truly believe that then

it becomes very limiting." Interestingly LL also reported a high level of student

satisfaction with his use of online instruction, felt his class "developed a real

sense of cohesion" but felt dissatisfied with the online discussion because "it

seemed so flimsy, so shallow, so superficial" compared to face-to-face classes.

While our interview data has some interesting anecdotal evidence, it does

not provide enough information to clarify the potential relationship between

attitudes towards technology-enhanced instruction and transformative learning.

Further research to explore this relationship could include a pre- and post

inventory of attitudes towards and uses of instructional technologies.

*Theme 3: Change in Pedagogical Style*

We found in the survey data Partners reported some changes in pedagogical style during and following the Partnership. 7 of the 16 survey respondents felt there was "some" or "major change" in their pedagogical style <u>following</u> the Partnership Program compared to six when asked if they experienced any change <u>during</u> the program. The number of survey respondents selecting "no change" remained consistent across both items (4 of 16). One weakness of this finding is that both questions were asked retrospectively. One way to improve future research design would be, in addition to using a pre- and post-program teaching style inventory, to collect data from faculty during their instructional development project to allow comparisons over time.

For both themes, changes in attitude towards instructional technology and changes in pedagogical style, it is not surprising that most of the Partners surveyed and interviewed self-reported minor or no changes. Most survey respondents were satisfied with the Program, stating that their initial goals were achieved (12 of 16) and that their expectations were met (13 of 16). Those initial Partner expectations were predominantly focused on instrumental goals, such as creating a learning resource. This data suggests that surveyed Partners had their original expectations met so did not experience a mis-alignment between expectations and experience. We would need to do further research, however, to explore the possibility that changes in attitudes towards instructional technology and changes in pedagogical style are a potential outcome of experiencing a mis-alignment between expectations and experience.

The interview data, however, provides an interesting example of a challenge to a Partner's pedagogical beliefs. BU anticipated a role transformation in pedagogical practice:

> I really want students to become involved in their own learning in any way they can; to take control of their own learning. It was very difficult to do that in a large lecture class…I was mostly a big entertainer…and 'what's going to be on the exam'. So, I had a philosophy but I wasn't able to instantiate my philosophy…very easily…My teaching philosophy has changed…to become even more learner centred and…trying to instil in our students critical thinking skills that are important, not only for continuing on in school, (but for life).

Expecting a technology solution would positively redefine her role and relationships in the classroom, she discovered instead a challenge to her habits of mind as a teacher:

> Here…I'm going to be the best mentor in the world, and it worked and I felt awful. I no longer was a teacher. I wasn't in control. It was the one thing I was not expecting was that I would feel a let down…that students are beginning to take control over their own learning...When the first student said, 'Would you get out of our discussion group and leave us alone?' that hurt.

RF had a similar experience in facing a successful shift to a more learner-centered

approach:

> There's so many things that I want to be able to share with my students and
>
> I've now basically lost control of half of the course, in that I'm not directly
>
> involved with it. Yet I know what they're getting off that virtual fieldtrip is
>
> just amazing, if they really, truly engage in it.

Jarvis (1999), citing Argyris and Schon (1992) explains this mis-alignment as

*disjuncture*, the basis of reflective practice leading to transformation. Both Partners

described a perceived success in changing their teaching practice but found a gap in what

they knew about themselves as teachers within this new context.  The disjuncture in that

realization, we believe, created an opportunity for these Partners to learn new knowledge,

attitudes, skills, and values by interrupting a process of habituation.

We found the evidence of disjuncture experienced by BU and RF to be a more

persuasively suggestive indicator of transformation than was evident in the data from the

other Partner interviews.  They both reported extensive learning about technical tools,

instructional strategies incorporating those tools and cycles of reflection during planning

and implementation stages of their development projects. Other interviewed Partners also

reported extensive learning and several reported undergoing cycles of critical reflection

and significant change. What we believe distinguishes their experience from other

interviewed Partners is that both Partners had most fully situated their new learning

within their particular context of practice and faced another order of challenges

prompting yet another cycle of critical reflection.  King (1999) and others (c.f. Jacobsen, 1996) describe transformation as a journey within a social context, during which individuals learn with their colleagues and have opportunities to apply new learning.

Knowing, from a situated cognition perspective, is not just an independent internal mental process, but is fundamentally situated as a product of activity, context, and culture. Culture is a "shared way of making sense of experience, based on a shared history...these learned systems are mediated primarily though language, which is itself interpreted through culture-specific conceptual frameworks of meaning and emerge through shared experiences" (Jacobsen, 1996, p.16).  We suggest that BU and RF's efforts to make sense of their new frameworks of pedagogy that now incorporated instructional technology, exemplified by their actions described below, completes a cycle of deep learning (Kolb 1984) and moves their participation within their respective interpretive communities from the periphery towards the center (Lave and Wenger 1991).

Some of the actions through which these two Partners expressed their new knowledge within their respective contexts included mentoring other faculty, working to establish department/Faculty based support for technology-enhanced instruction as well as evaluation and research activities surrounding their own teaching practice. BU reported helping to develop department-based workshops on effective uses of various instructional technologies, partnering with publishers to produce educational resources, as well as conducting new pilot projects and evaluating them. RF reported obtaining upgraded computer equipment for the department, and presenting at various on-campus faculty development events.  We suggest that these actions, focused on enhancing the

situated context in which they teach and their interpretive community are an outcome of one or more deep cycles of learning.

This cycle of learning, however, did not according to these Partners include changes in pedagogical belief. Both BU and RF reported minimal changes in their pedagogical beliefs or style.  RF was "…amazed it hasn't changed very much, it's just that I'm clearer about how it hasn't changed now." BU felt that her teaching philosophy has changed along a continuum "…to become even more learner-centered…which was always part of my philosophy…so yes, it has changed, it's matured."  This lack of self-reported significant change in pedagogical beliefs seems to counter the case for a transformative learning experience and calls into question our proposition that a change in pedagogical beliefs or style may be linked to an experience of disjuncture.  Kegan (2000), however, argues that the process of questioning personal assumptions is transformative regardless of outcomes of changes in practice because such a process develops a deeper internal sense of authority for the practitioner's beliefs.   We suggest that in both cases, the Partners critically reflective process strengthened their internal foundation of knowledge, supporting activities that externalized their new knowledge. We could also speculate that this greater internal sense of authority garners greater power for these individuals to overcome resistance within the social context of their department and Faculty.

*Contextual Issues*

Our interview data was rich in description of contextual issues surrounding the use of instructional technologies within teaching practice. We highlight the importance of contextual issues that situate the Partners learning experience for several reasons. First, the cycle of deep, reflective learning represented by Kolb, Schön and others is situated within a social context. Reflective practice within this context is subject to various social pressures from other individuals or the organizations within which people work. Lave (1988) suggests there is a "dialectical relationship" between thinking about practice and thinking about the situation in which practice occurs. We feel the need to consider the situation in which the Partners and ATL's practice occurred. Second, because our research model includes an action-research orientation, we were interested in pulling significant contextual factors from the data to inform further action to reduce or remove barriers for faculty teaching with instructional technologies. A better understanding of these contextual factors helps ATL to refine our model of collaborative instructional development. Third, Taylor (1997) and Fuller (1999) have asserted the importance of context in their discussions of transformative learning theory. Taylor critiques Mezirow for focusing theoretical discussions on cognitively oriented perspective transformations and cites studies such as Hunter (1980) in which transformations in behavior (changes in nutritional habits) seemed to be made without a developed cognitive framework (understanding why changes occur) (1997, par.13). We agree there is a need for further exploratory work that includes a greater consideration of transformations situated in practice.

In our study, several contextual barriers for changing their instructional practice were reported by the Partners.  Although most survey respondents were satisfied with the Program, stating that their initial goals were achieved (12 of 16) and their expectations were met (13 of 16), satisfaction with the Program did not predict future participation in instructional technology development work.  Some of the contextual factors reported by Partners included a lack of continuing support once faculty had returned to their departments, scarcity of funding, a lack of recognition for their work as scholarly, and a lack of time once Partner's course release(s) were completed.

The lack of ongoing support within departments was a barrier for faculty. SN noted, "My biggest frustration was that after the one year of release time I was expected to find (financial and personal) resources to continue on my own. There were no department (or) Faculty resources for continuing the project." The educational products developed did not necessarily have sufficient administrative, technical, and program infrastructures in place to maintain their use when the Partnership Program ended. HA lamented,  "While the University administration says they support this type of course development, there really is very little support beyond the initiation stage."

Most surveyed Partners received course release time (13 of 16); an indicator of support for instructional development work.  Many survey respondents (10 of 16) felt recognition by faculty evaluation committees for their work in the Partnership Program was very important. Based on anecdotes in Partner interviews, however, recognition was not uniformly received. Fuller (1999) notes that transformative education is not necessarily sufficient to produce change within a cultural context and that attempts to introduce change into a culture will be met with resistance by members within that

culture. One of the areas of resistance within our research-focused university context is limited recognition of technology-enhanced instructional development work. SZ felt that the Program would have been more effective if it had involved peer coaches that situated the learning experience within departments:

> So the…Program was…for early adopters and…they were supposed to be exemplars. ...One reason it sent the wrong message was it said 'In order to be involved in this game, you have to drop your research, you have to come to another building to immerse yourself full time in a whole new learning paradigm' and that was just way too drastic for regular mortals.  I think...academics learn and are influenced mostly by other academics…within their own department.

There is a need to implement and study collaborative instructional development models that maintain closer links with disciplinary and departmental cultures.  This shift is important not only for the sustainability of instructional development work but also for creating a more contextually appropriate experience for faculty, (a learning community) to learn about and to learn to use instructional technologies.  Finally, it is important to further study contextual issues that support or deter significant or transformational changes in instructional practice.

Conclusion

The Partnership Program study was designed to address firstly an action-research goal to inform and improve ATL practices and secondly to explore possible occurrences of transformative learning within the Partnership Program. Most of the participants in the Partnership Program study did not report transformative learning experiences. We can only speculate on the experiences of the 32 Partners who did not participate in the study. Starting with our action research purposes for the Partnership Program study, our findings suggest the need to situate collaborative instructional development projects within faculty members' interpretive community that includes their discipline, their department, and their Faculty. In retrospect, we see that bringing Partners into the Studio for an extended residency that removed them from their interpretive community and classrooms did not encourage situated practice. This contextual foundation seems to be needed to sustain the continued use of instructional innovations. We suggest that it is also needed to create a more contextually relevant learning experience in which faculty can act on their new knowledge, continuing further cycles of reflective practice.

Our second purpose, exploring occurrences of transformative learning and the implications for transformative learning theory, needed additional methodological activities to substantively address the topic. Practitioner self-reports of transformative learning experiences are relatively weak as a sole data source, particularly if they are only gathered retrospectively. Some ways to improve the usefulness of self-report data would be to collect a pre- and post-project inventory of both pedagogical style (beliefs and practices) and attitudes towards instructional technologies. Also, fitting data collection to the lifecycle of

the project would minimize reliance on retrospective self-reports, enabling better comparison of self-reported changes across the time span of the project and would likely improve the response rate.  Finally, additional data sources from pre- and post-observations of teaching would provide a more rigorous data set to infer possible occurrences of transformative learning.

In terms of the themes generated from our initial analysis, the anecdotal evidence we collected regarding changes in attitudes towards technology-enhanced instruction was insufficient to suggest a potential relationship with transformative learning experiences.  Further research is needed to examine whether there are meaningful links between changes in attitudes towards technology and a transformative learning experience during instructional development projects.

The two Partners who self-reported transformative learning experiences described in some detail their experience of disjuncture or a mis-alignment between their expectations and their experience during the program.  Other Partners in the study also describe mis-alignment between expectations and experience.  We suggest that the two Partners' experience of disjuncture was a learning opportunity that was supported and used by instructional development staff to facilitate deeply reflective learning.  One question raised by this study is how to encourage faculty to experience and act on a moment of disjuncture moment within an instructional development project?  Another question is, whether an instructional developer can predict this kind of learning opportunity when working with faculty members.

One of the essentials of transformative learning theory is that learners reframe their understanding (a perspective transformation) and then act based on

their new perspectives. Our study findings suggest the need for further research to distinguish between transformations in perspective and practice. In the case of teaching with technologies, practitioners not only need to know about them, they also need to know what to do with them, both knowledge <u>and</u> skills. Our study contained more than one case of practitioners who described how their understanding had been challenged and reframed but whose actions based on their new understanding were only somewhat changed.

One possible path for further exploration is to examine the question, 'how does knowing differently change practice if practice itself doesn't change?' We feel this is particularly pertinent within the area of pedagogy where an observable instructional strategy, such as lecture, can be situated within different pedagogical approaches that serve radically different teaching and learning goals. Another possible path is to look at factors within the practitioners' social context as suggested by Taylor (1997) and Fuller (1999) that may have affected their willingness or ability to act on their new knowledge. In our study, a lack of ongoing support, particularly financial support, and limited recognition of work within departments were two contextual factors that inhibited ongoing instructional technology development work. Finally, future research could examine whether a practitioner's experience of a critically reflective cycle needs to include changes in Lewin's concept of *valences* or connections to be considered a transformation of practice.

Reference List

1.  Argyris, C. & Schön, D.A. (1992). *Theory in practice: Increasing professional effectiveness*. San Francisco: Jossey-Bass.

2. Bates, A. W. (2000). *Managing technological change: Strategies for college and university leaders*. San Francisco: Jossey-Bass Publications.

3.  Chawla, S. & Renesch, J. (Eds.). (1995). *Learning Organizations: Developing cultures for tomorrow's workplace*. Productivity Press.

4.  Chin, S. & Hortin, J.A. (1994). Teachers' perceptions of instructions technology and staff development. *Journal of Educational Technology Systems, 22*(2), 83-98.

5.  Cranton, P. (1996). *Professional development as transformative learning: New perspectives for teachers of adults*. San Francisco: Jossey Bass.

6.  Dahler-Larsen, P. (2003). Evaluation packages in practice.  Paper presented at Nordic Political Science Association Conference, Retrieved June 7, 2003 from

7.  Ewing, J.M., Dowling, J.D., & Coutts, N. (1998). Learning using the World Wide Web: A collaborative learning event. *Journal of Educational Multimedia and Hypermedia 8*(1), 3-22.

8.  Foley, G. (2001, July). *Emancipatory organizational learning: Research and practice*. Keynote address at the Second International Conference on Researching Work and Learning, Calgary, AB.

9.  Fuller, F. (1999, April). *Web instruction as cultural transformation: a reeducation model for faculty development*. Presented to Northwestern State University of Louisiana Twelfth Annual Research Day. (ERIC Document Reproduction Service No. ED 429 499)

10. Glaser, R. (1991). The maturing of the relationship between the science of learning and cognition and educational practice. *Learning and Instruction*, *1*(2), 129-144.

11. Hunter, E. K. (1980). *Perspective transformation in health practices: A study in adult learning and fundamental life change*. Unpublished doctoral dissertation, University of California, Los Angeles.

12. Jacobson, W. (1996). Learning, culture, and learning culture. *Adult Education Quarterly, 47* (1), 15-28.

13. Jarvis, P. (1999). *The practitioner-researcher: Developing theory from practice*. San Francisco, CA: Jossey-Bass.

14. Jonassen, D., Dyer, D., Peters, K., Robinson, T., Harvey, D., King, M., & Loughner, P. (1997). Cognitive flexibility hypertexts on the Web: Engaging learners in making meaning.  In Khan, B.H. (Ed.) *Web-based instruction* (pp. 119-133). Englewood Cliffs, NJ: Educational Technology Publications.

15. Kanuka, H., & Anderson, T. (1998). Online social interchange, discord, and knowledge construction, *Journal of Distance Education*, *13*(1), 57-74.

16. Kegan, R. (2000). What "form" transforms? A constructive-developmental approach to transformative learning. In J. Mezirow (Ed.). *Learning as transformation: Critical perspectives on a theory in progress* (pp. 35-70). San Francisco: Jossey-Bass.

17. King, K. P. (1999, May). *How technology education transforms teachers' perspectives of their profession*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, PQ.

18. Kolb, D. A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. New Jersey: Prentice-Hall, Inc.

19. Lave, J. (1988). *Cognition in practice.* Cambridge: Cambridge University Press.

20. Lave, J., & Wenger, E. (1991). *Situated learning*. Cambridge: Cambridge University Press.

21. Mezirow, J. (2000). Learning to think like an adult: Core concepts of transformation theory. In J. Mezirow (Ed.). *Learning as transformation: Critical perspectives on a theory in progress* (pp. 3-34). San Francisco: Jossey-Bass.

22. Mezirow, J. (1994). Understanding transformation theory. *Adult Education Quarterly, 44*(4), 222-232.

23. Newman, Judith M. (2000, January). Action research: A brief overview. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*. Retrieved June 7, 2003 from http://qualitative-research.net/fqs

24. Rogoff, B. (1990). *Apprenticeship in thinking*. New York: Oxford University Press.

25. Schon, D. (1983). *The reflective practitioner*. New York: Basic Books.

26. Schon, D. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. San Francisco: Jossey-Bass.

27. Sokol, A. V. &. Cranton, P. (1998). Transforming, not training. *Adult Learning, 93*(3), 14-16.

28. Taylor, E. W. (1997). Building upon the theoretical debate: A critical review of the empirical studies of Mezirow's transformative learning theory. *Adult Education Quarterly, 48*(1), 34-59.

29. Tergan, S.O. (1997). Misleading theoretical assumptions in hypertext/hypermedia research. *Journal of Educational Multimedia and Hypermedia, 6*(3/4), 257-283.

30. Wilhite, S. C., DeCosmo, A. D., & Lawler, P. A. (1996). Faculty as adult learners: Implications for faculty development initiatives. *The Eastern Adult, Continuing and Distance Education Research Conference Proceedings,* The Pennsylvania State University, University Park, PA, October, (CD-ROM).