

Using Qualitative Processes in Computer Technology Research on Online Learning: Lessons in Change from "Teaching as Intentional Learning"

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Abstract: The use of computer mediated interaction systems worldwide has created not only a culture of usage, but also an entirely new mode of social interaction and thought. We argue that computer mediated interaction should be understood as neither oral nor written language, but rather as a post literate technological change of language itself. Following SHANK's (1993) notion of the multilogue as a form of communication, and ONG's (1982) pioneering work on examining orality and literacy in light of emerging understandings toward communication in these more technologically sophisticated times, we propose that systems of computer mediated interactions, especially those used for educational purposes, can only be understood using the combination of the logic and tools of qualitative research along with a semiotic understanding of the process itself. To explore these claims, the article examines computer mediated interaction within an educational online environment known as Teaching as Intentional Learning, or TIL (MOSS, 1998). Extensive use of patterns of data from TIL demonstrates that fundamental qualitative procedures are required to capture critical changes in teacher beliefs over time. These procedures align with notions of post literate communication, and the realization that both the modes of communication and the qualitative procedures used to capture them, are required to understand computer mediated learning and to build better modes for such interactions in the future.

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1. Introduction

An online learning community generates a history through those who build and sustain it. You are about to read a small piece of one such history taken from progress reports (PRs) of one participant, "Mary", during a 16-week session:

Mary—Week 3, PR 1, 2000

"My concern focuses on my ability to meet the learning needs of all my students by creating an active learning environment that is both supportive and inclusive of all student abilities. The largest assumption that I have is that for learning to take place in the classroom it must be teacher centered."

Mary—Week 8, PR 5, 2000

"I realized that I have to be a more flexible teacher with regard to my methods in order to truly meet my students' learning needs. I realized that both teacher—centered and student—centered lessons are appropriate and that one is not necessarily better than the other. I also realized that I may be creating part of the frustration my students feel with group work because I fail to provide variety in my teaching methods ... I fail to provide goals that allow for both independence and interdependence ... Rather than scaffolding and prompting them, I simply become frustrated and walk them through it step by step. I never thought about asking the students to not only provide their 'answer,' but also the thinking strategies that drove the entire learning process. If the students can begin to realize how important it is to select an appropriate cognitive strategy it will enable them to have a deeper understanding. I am realizing that not all learning is just the factual content ..., but also thinking dispositions are important."

Mary—Week 13, PR 10, 2000

"I am realizing the importance of allowing the STUDENTS to direct the learning process with my guidance, rather than personally trying to control every aspect. The students' strategies—and the students' reasons for choosing the strategies—are just as important as the facts. I am becoming more confident that I will be able to meet my students' learning needs and create an inclusive, active learning environment."

Mary—Week 16, Progress Report, 2000

"Rather than seeing the benefits of pairing students of different abilities together, I only saw the difficulties ... I was too busy "managing and orchestrating" the entire process, rather than serving the learning ... I mistakenly believed that to teach I had to be the driving force or the center of the instruction." [1]

The preceding artifacts were captured from the archives of an educational online environment known as Teaching as Intentional Learning (TIL) (MOSS, 1998). TIL is an educational option for online learners which includes, among others, working classroom teachers like Mary (not her real name). This series of messages serves to document a change which educational researchers often claim is difficult to foster in normal face-to-face settings—a change in teacher belief (MOSS, 2001a; NISBETT & ROSS, 1980; PAJARES, 1992; RICHARDSON, 1996). We are convinced that there exist many other, equally compelling, findings lurking within online data, just waiting for the right mix of theory and method to come along to help us discover and understand them. [2]

This article will address three key and inter-related issues:

1. How do exemplary and innovative online learning communities, such as TIL, differ from more traditional face-to-face learning communities?
2. How can we use qualitative methods to understand and explore those differences?
3. How can we combine our qualitative insights and our online insights to create models for future online learning communities? [3]

2. Theoretical Issues of Online Communication

Before we proceed to our data and its analysis, however, we must first lay out the theoretical underpinnings for understanding the nature and significance of these data. Two theoretical frameworks inform our thinking and our research into online communication—computer mediated communication (CMC) and multilogues. We will discuss each framework briefly. [4]

2.1 Discourse and computer mediated communication

The logical starting point in our quest to understand the unique nature of online learning communities is the concept of Computer Mediated Communication (or CMC). A large body of research on CMC systems exists and explores its nature and impact in three important areas: demographic data concerning individual users, how CMC operates within various existing models of communication, and CMC as a unique form of discourse. [5]

In the first area, research has focused on those individuals who tend to initiate and engage in online communication voluntarily and informally. It examines limits to the current pool of users who feel comfortable with CMC as a mode of expression. Given our informal perceptions of these matters, it is not surprising

that there are gender differences in who is online and who is not (i.e., SHADE, 1998). While young males continue to dominate voluntary CMC communities, there is evidence that trends in connectivity as they relate to individual diversity are indeed changing (i.e., BIKSON & PANIS, 1997). If these trends continue, then it is perfectly reasonable to expect that females and persons of color in general will become increasingly more comfortable with CMC as a mode of personal expression. Therefore, we should also expect online learning communities to become more natural to more individual users over time, allowing them to become familiar with the unique nature of CMC more rapidly. [6]

The second group of studies examine how CMC can alter existing communication patterns within various cultures and their uses of the Internet (i.e., FARWELL, WOOD, & BANKS, 1999; DYRKTON, 1996). For instance, there is a substantial body of research exploring CMC factors which might contribute to community building (i.e., HAKKEN, 1999; HARRISON & STEPHEN, 1999). Power issues, including empowerment potential (BRAY-CRAWFORD, 1999; GITTLER, 1999; YOUNGS, 1999) as well as the kinds of oppression that might be perpetuated online (i.e., BURKHALTER, 1999; HERRING, 1996), have also been examined. CMC has been shown to alter the ways that people communicate at work (KLING, 1996; SEIBOLD, HELLER, & CONTRACTOR, 1994; KRAUT & ATTEWELL, 1997; SPROULL & KIESLER, 1991a; WALSH & BAYMA, 1997). CMC has also been shown to promote practical changes in the ways that people teach and learn (i.e., BERGE & COLLINS, 1995A, 1995B; SCHULER, 1996; SCHOFIELD, DAVIDSON, STOCKS, & FUTORAN, 1997). [7]

The organizational research cited above has tended to stress the logistical and tactical changes brought forth by moving existing communication patterns and structures into the CMC realm. There has also been a smaller but interesting body of research to support the notion that some changes rendered by CMC are not just changes in degree or method of delivery, but changes in kind. That is, they claim that CMC does not enhance or modify existing communication modes—instead, it is a new and unique mode of communication with its own properties and rules and uses. Some of that research has explored the text-based nature of CMC (i.e. BAYM, 1996; CARNIVALE & PROBST, 1997). Others have examined critical issues in discourse analysis (DENZIN, 1999; SCHARF, 1999). Some of the research has not only revealed characteristics of language use (i.e., CHERNEY, 1999a; WERRY, 1996), but have go on to note CMC's influence on the basic characteristics of discourse in online communities (i.e., BAYM, 1998; CURTIS, 1997; FERNBACK, 1999; KOMITO, 1998; LOCKHARD, 1997; MOSCO, 1998; WEISE, 1996). [8]

The examination of discourse characteristics for online communities is certainly a move toward establishing the uniqueness of CMC, but it stops short of realizing just how basic that uniqueness really is. We are particularly interested in those who have taken a more radical focus and have examined changes in orality and literacy within online discourse as compared to face-to-face interaction. Differences in discourse and communication patterns have been found in even the earliest research into CMC. For instance, HILTZ & TUROFF (1978) con-

trusted discourse produced in bulletin board systems (BBS) with discourse exhibited in synchronous discussions. They concluded that the asynchronous character of the BBS cultivated a great deal of unreserved and casual fellowship. Propelled by this fellowship, participants exhibited greater tendency for equal participation with more participants both contributing opinions to and soliciting opinions from others. SPROULL & KEISLER (1991b) evaluated two groups of people collaborating to solve a problem. The first group met face-to-face, while the second group met via a BBS. The researchers remarked that the group using the BBS collaborated with greater equity, produced more ideas, displayed more emotion, and required more time for the participants to reach a decision. In other words the social influences of CMC impact both the quality of interactions and the language that emerges from those interactions. [9]

Current work has focused more on understanding the theoretical bases for the changes in the nature of discourse among online communities. For instance, PAOLILLO (1999) concluded that social influences are so strong that social network relations form the principal vehicle for language change. That change happens because those in regular communication with one another tend to share common language characteristics, often borrowing the features of each other's language varieties. Following that logic then, the issue of how CMC affects language use and development may be best understood through an appreciation of how CMC affects social contacts among individuals, given that online interactions can impact the evolution of language in interesting ways. [10]

Understanding how language changes and evolves through online systems, however, will require new conceptual and new interpretive frameworks. For instance, DECEMBER (1993) described the characteristics of oral culture in CMC discourse borrowing heavily on the work of MCLUHAN (1965), MCLUHAN and FIORE (1967) and ONG (1982). He concluded, and we agree, that even though CMC is based on text driven interaction it exhibits a surprising oral quality that recreates the immediacy of pre-literate cultures while adding on space and time dependence. This is because we believe that computer mediated interaction systems create not only a culture of usage, but also an entirely new mode of social interaction and thought—a mode of communication that is neither oral nor written language, but rather a post literate technological change of language itself. [11]

2.2 Understanding and studying multilogues in online learning communities

The key concept for our understanding of CMC as a unique postliterate form of communication is the concept of the multilogue (SHANK, 1993; SHANK & CUNNINGHAM, 1996). There are two key aspects that differentiate multilogues from other modes of communication. First of all, multilogues allow for the development of modes and patterns of communication that we rarely find outside of multilogues. For instance, the most common mode in online learning is the notion of the thread, or a discussion occurring simultaneously but also asynchronously among some or all of the learning participants. While threads are an important property of multilogues, and most likely the topic of future research

with this body of online data, we will not focus upon the nature and actions of threads or other communication patterns per se in this study. Instead, we want to examine the second key aspect—how the presence of multilogging changes the climate of learning, thinking, and reflection. [12]

ONG (1982), in his groundbreaking look at orality and literacy, made us aware that "writing transforms consciousness" (p.82). By this, ONG meant that people in literate cultures tend to think about the world in different ways from those persons who live in oral cultures. Specifically, literate cultures are, among other things, more abstract and more hierarchical in their modes of understanding the world. Part of this is due to the nature of how writing is produced and consumed. Writers write in solitude and readers read in solitude. There is an inherent isolation to both the reading and the writing process, thereby creating a need to create and read text that is both concise and ordered. In contrast, oral cultures are inherently social since oral communication involves an instant and ongoing interaction between the speaker and the listener. [13]

What happens when these sorts of dynamics are extended into hyperspace? The results are complex. CMC has the social interactional dynamics of orality, but also the isolation aspects of literacy. That is, it is neither fish nor fowl. Therefore, it does not seem unreasonable to suggest that CMC is neither oral nor literature, but is some new and third form of postliterate communication. Furthermore, if we follow ONG's dictum that a new mode of communication engenders new modes of thinking about the world, then we must also conclude "CMC restructures consciousness." [14]

If we truly believe that "CMC restructures consciousness," then most of the important changes that we should find when we examine learning in an online community should be changes of kind, and not changes of degree. That is, online learning communities will offer and deliver totally unique modes of learning that will foster changes in thought that will follow different patterns than those we might find in more traditional communities. Therefore, we are *required* to use qualitative methods to study the nature and types of learning that occur in these communities. To see this point in action, we will now turn to an exemplary online learning community that does indeed foster these sorts of unique learning experiences. [15]

3. Methodological Considerations

We are convinced that a qualitative approach is absolutely necessary to understand the real changes and dynamics that are embedded in the complex archives of online learning and participation that we will examine. There are several good reasons for holding this position. First of all, these multilogues are deeply and inexorably rooted in issues of meaning, and qualitative research can be thought of as a systematic empirical inquiry into meaning (SHANK, 1994; SHANK, 2002). [16]

More importantly in this particular context is the fact that we have precise records of seemingly casual and extemporaneous discussions documented and organized in threads and other sorts of multilogues. There is a strong temptation to create coding schemes to organize and systematize these data. In the end, however, we chose another path. It was our realization that this sort of data, geared as it was to the change and evolution of beliefs within a shared online culture, actually required a quasi-literary approach. That is, we chose to adopt a sort of "close reading" of our data as a complex text about learning, scholarship, practice, and change. [17]

3.1 Contextualizing the notion of close reading

We need to pause a bit and describe the sense of "close reading" that has governed this study. The notion of close reading can be just as tricky as, say, the notion of phenomenological analysis. We use it in two, related ways. [18]

First of all, there is the idea that coding is primarily hierarchical and as a result, it "rewards" those comments and ideas that occur most frequently. One sense of close reading is the idea that crucial nuggets of insight are often infrequent, so there is a need to sift through the text looking for these sorts of nuggets. Relying solely on coding strategies, and especially coding software, tends to bury these infrequent responses, rather than bringing them to the surface where they can be studied. Therefore, the only way that these nuggets can reliably be found, then, is when we examine our database carefully, looking for those instances of insight or those patterns of growth that sound out on their own accord. This is the first, and most practical sense, of the notion of "close reading" that we employ. [19]

Once our treasured nuggets of insight have been found, they often tend to link with other nuggets to create complex patterns of processes and growth in action. Therefore, we need a sense of "close reading" that allows us to discover and characterize these embedded patterns. This second nuance of close reading we have drawn from the works of SAUSSURE (1959) and BARTHES (1968). [20]

SAUSSURE gives us the extremely valuable notion that many patterns of intelligibility within social settings and culture can be "read" as if they were languages. In a sense, we have been looking for the "language" of teacher belief, and we will be able to demonstrate examples of that "language" in action when we look at evolving patterns of beliefs and orientation within our online learning community. [21]

BARTHES, in his semiological method, believed that texts manifest structures that are both denotative and connotative. Our "denotations" have been our discovery of exemplars of various stages of belief as they arise in normal online conversation. We arrive at our "connotations" when we see exemplary cases of changes in belief strategies manifested by teachers as their belief systems change. In order to demonstrate both these sorts of denotations and connotations, however, it has been necessary for us to quote in much greater detail than one might find in the average code-oriented article. We feel that the

increase in quotations is more than offset, however, with the ability to illustrate and map out these various patterns, types, denotations, and connotations. [22]

3.2 Documenting the growth of insight within a learning community

One crucial reason that we could adopt the sort of close reading strategy that we used, where rich data was brought to bear on key topics, was because we were members of this same learning community. As involved and committed participants, we knew just where to look for our insights because those key turning points were a vivid part of our own involvement in the learning community. We are not concerned about losing "objectivity" because, whenever and wherever we could, we let the participants speak for themselves. Had we adopted a coding strategy, we are convinced that many key points would inevitably get buried under the weight of trying to find proper coding for each and every statement made online. We allowed our own experiences, rather than the dictates of a code, to guide our selections. [23]

This leads us to one final methodological concern. If it seems to be true that intimate participation is the best way to find key insights within patterns of online communication, can a researcher from the "outside" ever do justice to an online dialogic community? Does the documented record contain enough richness and context to allow a researcher to approach it for the first time, and wrestle with its identity and complexity? Or will online research become a bottom-up process, where the most involved participants bring their situated experiences and understandings to the process of creating a complex and nuanced interpretative picture of their community and its functioning? These are questions that qualitative researchers of online communities need to examine and ask over and over again. Ironically, turning to pre-packaged computerized coding programs may be the worst way to understand other forms of computer-mediated learning and interaction. [24]

4. How the Online World Lives in TIL

It is one thing to pronounce new theory, and it is quite another thing to show how that theory operates in the real world. The remainder of this paper will serve to demonstrate how the dynamics of CMC operating through ongoing online discussions and reflections help online learning communities not only function as effective learning settings, but also as learning settings that foster unique forms of learning. The learning community under consideration is, as was noted earlier, Teaching as Intentional Learner, or TIL for short. [25]

TIL is a professional learning community, headquartered in the School of Education at Duquesne University in Pittsburgh, PA, US, serving over 400 practicing and retired educators from school districts and universities worldwide. It is the fusion of three "functionally bonded" elements—an intentional learning community, a process of systematic and intentional inquiry, and an online learning environment. Some participants elect to receive university credits for their participation, others elect to receive professional development credits, while

still others engage in professional learning that is not credit bearing. For those participants who receive credit, flexible guides and timelines enable them to learn on demand and to document their learning through periodic progress reports that they submit to the instructor of record for feedback. [26]

How do you capture the uniqueness of a learning setting like TIL? Traditional research tends to direct us toward the discovery and examination of key component factors, and then the manipulation of these factors in experimental or quasi-experimental fashion. That strategy, however, is completely inappropriate for our purposes. For one thing, these sorts of research strategies work best when we are studying changes in degree. For instance, we might design an experiment to show that TIL might deliver a greater amount of information than a more traditional instructional delivery system. Such a question, however, misses the crucial changes that a system like TIL engenders. TIL is not about delivering more information per se. It is about changing the nature of the learning experience itself. In other words, systems like TIL are designed to provide opportunities for learning that could not be provided in any other fashion. When the criterion of your research is to find out what makes your object of study unique, then you have no other choice than to study it qualitatively (SHANK, 2002). [27]

In order to situate our discussion, the following section will examine the grounding principles of TIL as reflected in its basic design. Beyond these grounding assumptions, however, are two other implicit theoretical foundations. First of all, TIL is an example of a situated cognition system. The role of situated cognition as a basis for the learning theory proper of TIL will be examined. Then, the nature of TIL as an online operational learning environment based on a scholarship of practice will be stated and illustrated via actual data. [28]

4.1 TIL: Two grounding assumptions

While a complete description and discussion of TIL's design is not possible in this article, it is important to make two of its grounding assumptions explicit. Within the description of the assumptions, we will discuss the ways that TIL's learning environment design fosters a culture of systematic and intentional learning inquiry. [29]

First, TIL's design embodies the belief that powerful professional learning originates from the real concerns that arise from educational practice when educators view those "concerns as invitations to learn rather than as problems to be fixed (MOSS, 1999; 2001b). Educators use a process of systematic and intentional inquiry—the TIL Process (MOSS, 1998)—to create a personal learning agenda that involves moving from a real concern that arises from their daily classroom practice to forming a causal explanation for the factors that contribute to the concern. As part of the process, educators reveal and challenge their assumptions about teaching and learning that underlie their concern. Once they reveal their assumptions, the process guides them to challenge the assumptions

by bringing outside evidence from relevant theory, research and effective practice to bear on the validity of those assumptions. [30]

The learning agendas created by TIL participants are intimately tied to their daily practice and their personal beliefs. It follows then that these agendas unfold in messy and unpredictable ways. The online environment is specifically designed to foster collaborative inquiry via asynchronous and synchronous conversations. Particularly relevant to our discussion of TIL, bulletin boards afford members the opportunity to discuss a myriad of issues unhampered by time limits, distance, or conflicting schedules. [31]

Second, the design of TIL manifests the belief that there is a vital difference between instructional environments and professional learning environments (MOSS, 2000). That is why its human, information, and communication resources are organized to serve the learning agendas, rather than to dictate such agendas. Participants collaborate synchronously via unscheduled community and private chats. They also collaborate asynchronously using e-mail messages, as well as through threaded discussions within TIL's bulletin boards. [32]

TIL's bulletin boards are organized by five domains of teaching and learning—human development, cognition and learning, instructional design and delivery, motivation and leadership, and assessment and evaluation. In this way individuals can discuss common educational issues even if they are driven by very different personal learning agendas. For example, several educators might enter into a discussion of intrinsic motivation. One might be pursuing inquiry into student absenteeism, another might be questioning report card design, while still another might be researching the utility of problem-based learning. [33]

TIL's online information resources are organized by the same five domains and include executive summaries of key theoretical principles, a searchable information/resource library (the CASTL library), and three standing conferences focused on issues of: urban learners, middle schools, and at-risk students. The environment is facilitated by online community members who function as resource specialists and who contribute expertise while pursuing their own learning agendas. In this way all participants function as intentional learners. [34]

4.2 TIL's commitment to situated cognition and the scholarship of practice

Because of its grounding assumptions, TIL represents a unique online environment for examining the ways that virtual lifeworld discourses weave the fabric of its own ongoing "natural history" while influencing the very identities of those within the learning community. One reason for the presence of these sorts of dynamics is the fact that the design of this learning community was supported by a theoretical and philosophical commitment to the concepts of situated cognition and the scholarship of practice. [35]

In situated cognition the mutual relationships of context and content, of the individual and the environment, and of knowing and doing are understood

through the belief that learning is situated and continuously advances through activity in a community of practice (BROWN, COLLINS, & DUGUID, 1989; LAVE, 1988; LAVE & WENGER, 1991). Developing a full appreciation for the quality of the social and cultural interactions among the individuals in a given environment is a cornerstone of situated cognition (LAVE, 1988, 1993). Interactions in the community not only produce meanings about the communal world but also form identities (BARAB & DUFFY, 2000; LAVE, 1993; LEMKE, 1997; WALKERDINE, 1997; WENGER, 1998). With this focus on the community and what it means to learn as a function of membership in that community, the unit of analysis shifts from the individual context to the social context. As LAVE (1993) states "developing an identity as a member of a community and becoming knowledgeable skillful are part of the same process, with the former motivating, shaping, and giving meaning to the latter, which it subsumes" (p.65). [36]

The developing norms of the TIL community help to shape (while also being reciprocally shaped by) the identities of the participants as they share a commitment to scholarship. In this community each participant is becoming a scholar of his or her practice. The notion of "becoming" carries with it the expectation that scholarship is formative and continuous. Each member, regardless of experience or position, enters the community as an intentional learner. Explicit references to this intention: anchor the explanations of the online environment in the TIL resource guide (MOSS, 2001b); are built into the name of the community itself; and, are contained in the initial login requirements (participants use the password "scholar" during their first login). In addition, the shared commitment to scholarship carries with it the expectation that members will challenge each others' assertions by demanding that unsupported opinions are examined through the lens of relevant theory, research, and effective practice (MOSS, 2000). Because of this expectation, members find themselves engaged in vigorous discussions of the teaching-learning process. These discussions, housed on TIL's bulletin boards, focus on: collaborative problem-solving, systematic and intentional inquiry, and data driven decision making. [37]

The following exchange puts "flesh" on the community's commitment to developing scholarship and provides a glimpse of the ways that identities as scholars of practice emerge. It represents excerpts from a threaded discussion from TIL's motivation and leadership bulletin board. The thread contains twelve individual posts and begins with a question by *John* (not his real name). We labeled posts by the name of the community member, the position of the post (in a thread of twelve posts), the kind of exchange—in this case bulletin board post (BBP)—and the year:

John—BBP, 1(12), 2001

"I have just begun teaching in a new school about two weeks ago. At my old school, many of the students had very little intrinsic motivation. It was very difficult to have them complete tasks. I began using extrinsic motivation thinking that it would help. I learned almost immediately that extrinsic motivation only sugarcoated the problem it did nothing to change their motivation. At my new school, the students are completely

different. The students are driven to work and they want to succeed for themselves. They are intrinsically motivated. They ask me for more work to complete because they enjoy the learning process. The problem I have is that I want my students to continue to be intrinsically motivated without having to resort to extrinsic motivation. I also wanted to learn some ways I can adjust my teaching so my students will continue to be intrinsically motivated."

Susan—BBP, 2(12), 2001

"... You've raised questions about the use of intrinsic vs. extrinsic motivation, which is a subject that I continually am fascinated with ... I am curious about your teaching experiences that brought this question to mind for you. Could you share some of your observations about your students and your classroom that have caused you to be interested in this question?"

Marie—BBP, 7(12), 2001

"I am wondering what assumptions are at work here. It is sometimes easy to assume that when students get good grades or have a positive attitude that they are intrinsically motivated. Yet, we know that outward appearances aren't always accurate.

Can we make assumptions about intrinsic motivation based on general impressions of groups of children? 'John', you say that in your last school students were not intrinsically motivated, yet here in your new school the students are. I am wondering what assumptions underlie this assertion. Is intrinsic motivation a general concept that applies to all of your students in all contexts? ... you may have students who are motivated intrinsically in some areas but not in others. You may have students working for good grades—would that make them intrinsically motivated? Some may be working to please their parents or to get paid for grades on their report cards ... Bottom line, what are the characteristics, performances, actions, statements, or other observational evidence that lead you to believe that all of your students are indeed intrinsically motivated? Thanks for getting me thinking about the nature of intrinsic motivation and the behaviors we can observe as we gather evidence to support our assumptions."

Paula—BBP, 9(12), 2001

"This is a really interesting question 'Marie' asks when she says: 'Bottom line, what are the characteristics, performances, actions, statements, or other observational evidence that lead you to believe that all of your students are indeed intrinsically motivated?'

It causes me to think about my own students at college and the observations I make about them. The learners I term intrinsically motivated are in it for the learning. They often come to me to ask further questions, not because it might be on the test, but because they just want to know and understand it better. They ask deep thinking questions. They wrestle with answers. They go beyond the first question and the simple answer. They try to form analogies. They want to make applications. Sometimes they apologize for continuing to ask questions: they are sorry to take up so much time, but they really want to understand this. They come back with an article they've found that speaks to this question. They ask more questions.

I often note that learners of this type are trying to solve a problem directly related to their life or one of their students, friends, or family members.

As I read over this description above, I am thinking that it should not be surprising when we lack intrinsically motivated students, since much of our learner's curriculum is dictated and it therefore does not evolve from problems and issues they see as being directly related to their lives. I'm thinking that intrinsic motivation most naturally occurs when a learner encounters a problem/puzzle/obstacle directly related to their life or the accomplishment of a personal goal. I'm wondering right now if it is possible to have intrinsic motivation without this link to a learner's personal goals or life questions.

I am wondering how others characterize intrinsically motivated learners. What do you think?"

Susan—BBP, 11(12), 2001

"'Paula' and 'Donna's' observations have gotten me thinking about what it means to be intrinsically motivated. 'Paula' notes that: 'learners of this type are trying to solve a problem directly related to their life or one of their students, friends, or family members.'

I agree completely that we are more likely to be intrinsically motivated if we have a personal reason to engage in learning. But I also think that it depends on the nature of the problem we're trying to solve. For example, when I study for the written test to get my driver's license, I have an authentic, relevant reason to engage in the learning, but I wouldn't classify my motivation as intrinsic. I do it because I'm required to if I want to be able to drive. On the other hand, if I read about motivation on TIL I am intrinsically motivated, because I choose to do so to enhance my own learning and teaching.

I think there's another important factor that comes into play, and that's a sense of self-determination (which can be searched in the CASTL library). Deci's theory of intrinsic motivation claims that our behavior can be externally or internally regulated, and only when it's internally regulated are we intrinsically motivated. So when I study for the driver's license exam, there is an element of external regulation when someone else tells me I must take the exam in order to get my license. However, when I read about intrinsic motivation on TIL, my behavior is entirely internally regulated—I do so because I choose to ... It makes me wonder how often we require our students to 'take their medicine from a cup' when they could just as easily let them choose to take it from a spoon.

I read a fascinating research study on teachers' beliefs about giving students choices ... [the study] found that teachers believed that giving students choices is an important way to increase students' self-determination. Ironically, however, when asked how they use choice in their classrooms, many teachers indicated that they use choice as a way to reward students' behaviors ... choice is used to externally regulate the students' behavior, in direct opposition to the value of self-determination. ... this study provides a perfect example of the importance of continually examining our assumptions about the teaching-learning process, and reflecting on how those assumptions translate into our everyday teaching practices. Thoughts, anyone?" [38]

The thread begins with a question, and the discourse that arises is rigorous, honest, and centered on learning. Each participant functions as a learner, yet each participant also functions as a teacher. [39]

5. Characteristics of New Members of the TIL Community

Traditionally, professional development rarely encourages educators to design their own learning agendas or to strive to become scholars of their own practice. More often than not, professional development comes in the form of in-service training that is unconnected to classroom life (DARLING-HAMMOND, 1996; GUSKEY & HUBERMAN, 1995; HARGREAVES & FULLAN, 1992). The training is delivered by outside experts who view teaching as technical, learning as packaged, and teachers as passive recipients of "objective research" (LIEBERMAN, 1995, p.592). One advantage of such professional development programs for many practicing educators, however, is the fact that these sorts of efforts are familiar and therefore comfortable. [40]

The approach that TIL takes toward professional development, as a scholarship of practice, is radically different from the experiences of most educators. Is it any wonder then that the idea of contributing a personal area of concern for individual and collaborative inquiry can often make new TIL members uncomfortable? You can feel their anxiety in the words of their initial statements about their concerns. The statements range from the trite and mechanical to the deeply personal and compelling, and everything in between. [41]

Looking at initial statements is an excellent way to gauge thoughts and beliefs of participants at the outset, and to use as anchor points when we see changes in thoughts and beliefs as they unfold in the process of online discussions and participation. Even though these statements vary greatly in terms of emphasis and contents, we can group most initial statements into the five different types that appear below. Each type is accompanied by illustrative examples. The examples are labeled by the name of the participant, the type of message—Bulletin Board Post (BBP) or Progress Report (PR), and the year. All of the examples are taken from the first progress reports or the first post to a bulletin board. [42]

5.1 Initial statement group 1: Blissful ignorance

Blissful ignorance statements seem oddly inappropriate. They seem to say "I don't really understand the culture of this community". Both their tone and content discount the scholarly nature of the online community. They "sound" and "feel" off-key:

Shirley—BBP, 2001

"I am interested in finding some quick and easy recipes that can be completed in a 40 minute class of eighth graders." [43]

Blissful ignorance statements also appear naïve in the ways that they treat complex issues often casting them in a causal light:

Margaret—BBP, 2001

"I am interested in any suggestions for improving the organizational skills of first graders. I have not taught first grade in ten years ... Also, tips for organizing my classroom would be great." [44]

5.2 Initial statement group 2: Pavlovian response

Pavlovian response statements are knee jerk reactions to the online culture. Merely toe-dipping into what it means to contribute a learning agenda to a community of practitioners, the statements are expertly crafted but seem mechanical and deliberate. They are robot-like in their complete lack of emotion. They read like an edited assignment and seem to say "I have to have a concern to get into this club, so here is a statement that I can pretend to be concerned about."

Anthony—PR, 2000

"I must ascertain what my legal and professional responsibilities are in order to establish a collaborative relationship with the learning support teachers thereby helping to guide the student toward the educational success necessary to meet the established learning objectives."

Melanie—PR, 2000

"How do I effectively teach pragmatic social skills to children with autism and/with their age-equivalent peers?" [45]

5.3 Initial statement group 3: Leaky roof

Leaky roof statements identify a concern that may have existed for ten years or ten minutes. It makes no difference, because the concern is seen as an event that is obvious and that just needs fixed. These statements not only identify what is wrong, but also state the conditions for the repair work, often compartmentalizing a concern that has major ramifications if considered in a relational way. Leaky roof statements seem to say "Yes, I noticed the roof has been leaking for a while and I've meant to get it fixed. I want it fixed now, but I don't want to tear up any other parts of the house, no matter what."

Karen—BBP, 2001

"I have several students who consistently turn assignments in late or not at all. (I teach 6th Grade English at a Middle School.) It is affecting their grades since these are major projects for the class. The building policy on large homework assignments is that everyday the assignment is late, it drops a grade level. The lowest grade possible when late is 50%. This does not affect them. Some turn it in days late. Others don't turn it in at all. I tried to have all of the work completed in class to avoid

the problem of students not working on their own. They still do not complete the work unless it is done within one class. We are attempting to work on responsibility."

Jennifer—BBP, 2001

"I can't figure out how to reinforce spelling words after the week's test grade is taken. My 6th grade students miss words on the test, but I'd like to help them learn the words somehow even if not for a Friday test." [46]

5.4 Initial statement group 4: Answer bringers

Answer bringer statements are opinions masquerading as concerns—rhetorical questions. For the answer bringers the bulletin boards will not be places for give and take, but rather places to preach to and impress the less enlightened. They seem to say "Here is what is wrong and here is the answer, I have no intention to collaborate. I need an audience for validation."

Rita—BBP, 2001

"My concern is that there are many exceptional students who are not being reached through the traditional curriculum. I believe that by using the arts (visual art, dance, music, and theater), we can create a way for these students to effectively gain knowledge and communicate what they have learned. Teachers and administrators need the tools to implement a strong arts curriculum in their own schools. It is through the arts that we open up students' eyes to the beauty and the details of the world around them ... By using the arts to enhance our curriculum, the students win because they will be able to see interdisciplinary connections and learn to apply them."

Frank—PR, 2000

"My initial area of concern stems not from a specific classroom practice but rather from classroom practices in general and the effect of governmental policies on teaching methods. My main concern deals with the use of national standards, their influence on classroom instruction and assessment, and their effect on education quality and funding. The importance of this research is timely as we examine the agendas of the presidential candidates. Further, the education community at large is grappling with these issues. The number of new initiatives to improve education such as accountability, charter schools, vouchers, standardized tests proves the importance of my research effort." [47]

5.5 Initial statement group 5: Commitment

Commitment statements appear not only personally and professionally significant, but are fueled with intimate purpose. They are authentic questions and contain a sense of skepticism and uncertainty. They seem to say, "I am struggling to understand something real in my professional practice because understanding it would be meaningful."

Laura—PR, 1999

"Switching from a 6th grade English classroom to an 8th grade English classroom has perplexed me on how these same students that I taught two years ago have changed in a relatively short period of time. ... Why, and what happened to cause such a change. By mid first term, I realized the same motivational techniques used in the past did not work. I have also noticed their growth rate, both physical and emotional, are so very different from what I have been used to."

Heather—PR, 2000

"No matter how many children I have come in contact with, I am never fully prepared to deal with the situations these children are dealing with on a day to day basis. Seventy-five percent of my class comes from a broken home in which they are either being raised by mom, dad, grandmother, or someone who is not even related. This is a concern of mine that keeps me up at night and is the first thought I have in the morning. No matter how much these children try, they bring to school these situations and they weigh heavily on these children who are too young to even take care of themselves. ... It is my intention to place all of my efforts into discovering the best way to reach these children. To help them to overcome their situations at home and to become the best students they can be." [48]

As we move beyond the documentation of these sorts of initial statements made by online community members, we gain a growing sense that documenting the process of ongoing change is just as intelligible as the process of documenting these initial perceptions and opinions. That is, change within TIL also tends to follow systematic patterns, which we will now examine in some detail. [49]

6. Stages of Professional Learning Within TIL

Members of the TIL community use the unique concerns that arise from their practice to drive their professional learning. In this way their learning is intimately tied to their individual practice, but situated in a community of collaborative, intentional, and systematic inquiry (MOSS, 2001b). Members of the community, who register for university credits, document their learning through periodic reports that form an online journal. The reports are e-mailed to the instructor and are not available to the rest of the community. The language in the reports documents the changes that occur in teacher beliefs, understandings, and classroom practice. The changes unfold in four stages as educators grapple with this new way of learning and with becoming a member of this unique learning community. [50]

Not every teacher begins in the same stage, and at times, educators cycle back and forth between stages. The stages represent ways of thinking that provide valuable information about the process of change in the context of the TIL community. To illustrate the four stages in action, we will follow one teacher, *Cathy*, who exhibits characteristics of all four stages as she describes her learning, thinking, understanding and practice through a series of 16 weekly progress reports. [51]

6.1 Platitude stage

Educators who begin here often describe their learning in stereotypical ways. Their language reveals a position of mechanical compliance. Their words seem to echo old saws and educational truisms. Educators in this stage go through the motions, talking about their learning as an assignment or a job, and never seeing it as a self-directed opportunity. In the platitude stage educators choose to remain invisible. In a face-to-face learning experience they could choose not to speak, but others would be aware of their presence. Online they can remain hidden. *Cathy* chose that option for many weeks, deciding to go it alone.

Cathy—PR 3, 2001

"I want to implement new teaching techniques in order to improve reading instruction. These are all research-based techniques, which is a new focus of the district. Some of the techniques are word building, syllasearch, Directed Reading Model, and Questioning the Author ... I would like to focus on Instruction to understand the best ways to deliver knowledge to students, this would in turn help me figure the best way to serve the teachers of my schools." [52]

In the next excerpts, we follow *Cathy* through the fourth and fifth weeks of her online experience. She continues to recite the litany of what she did so that she will receive credit. *Cathy* still does not choose to interact with other members of the community. She does not post and does not read any of the posts on the bulletin boards. In fact, in the platitude stage, educators tend to do "parallel" learning rather than collaborative learning. Each educator remains in his or her own path, preferring solitary research in the online library and private discussion with the instructor rather than exchanging thoughts with other members of the learning community. In this stage collaboration is not valued or pursued.

Cathy—PR 4, 2001

"I have been reading several pieces [of research] ... One of them is very difficult to understand right now. I will tackle it later. It is about Distributed Cognition. I do need to do some work in this area, but I found myself reading more articles about reading instruction. I have decided to work in this area for this week and next ... Anyway, I am going to continue my search for relevant material to prove to myself that the Beck groups techniques really do work ... I found several web sites that dealt with 'self efficacy', a new concept to me. I went to [URL] first. There I began to clear up my understanding of the concept. The article helped me clarify my thinking. Interesting how our beliefs about specific aspects of ourselves powerfully influence our potential I ..."

Cathy—PR 5, 2001

"... I focused most of my time on reading research. I have written brief summaries or my interpretations or impressions of the articles. I have read these because they pertain to my concern with reading instruction. I also read some articles about metacognition and cognition. I have been looking for these because I need to learn more about how people learn in order to help them learn. This includes teachers and

students. I must become the expert whether or not anyone else listens to me. I think I have to have a broad knowledge base to create that expert status ..." [53]

6.2 Suitcase stage

In the suitcase stage new learning begins to bump up against personal beliefs and practice, yet the educator keeps the new learning separate and compartmentalized. Not willing to "cross the streams", the educator views what happens online as not real. That is to say, the educator views the online learning as isolated information that may or may not be applied to practice at a later date. Because of this, the language sounds partitioned and disjointed. At this stage learning is viewed as something that happens inside one's head through study and reading. Once the learning is finished, the educator can go and enact it in the classrooms. [54]

Interaction with the online learning community is equally partitioned. The participant may choose to interact with one or two others through private chats or in private e-mail. The educator may even choose to post to a bulletin board. At this stage, however, the interactions are still viewed in give and take terms. "I give my opinion or ask my question and then I take whatever is offered into consideration." In fact, while the learning is becoming more self-directed, posting to the bulletin boards is viewed as something that must be done to fulfill the requirements of the community. Educators in the suitcase stage are still just visiting in the community—they are not at home and behave in formal ways.

Cathy—PR 7, 2001

"I am still looking at reading research, but realize this is mostly for myself. I do not have a reading specialist degree, but am being looked at as a reading expert in my current context. I believe that I need to know as much as possible about reading. I discovered this through a rather vague post I placed on the learning BB. I received several responses which have given me much to consider.

This next week I plan to post several messages ... I have already posted two on learning and found a lot of support. I plan to begin asking questions about Motivation, I am really curious to learn more about that area.

I will also try to learn whatever I can about leadership, through the experts of course. Thanks for encouraging me to post, it has been a huge help. I have been feeling more confident about my knowledge of reading instruction. But at the same time I have been feeling very intimidated. I will feel more confident trying out some of my new learning once I am sure that I understand it fully. I think my focus this week will help my understanding of how to do that ... you stick with what you think works. I need to do something, but do not know what that something is." [55]

6.3 Crisis stage

Faced with the realization that previously held assumptions might be invalid, and long held practices might be ineffective, educators may now feel embarrassed and confused. Their language reflects the confusion that they feel as the familiar

slips away while being replaced by uneasiness and chaos. As they begin to change their own mind they also begin to realize that they cannot go back to the practices that their previous flawed beliefs supported. In this way, the crisis stage represents a crossroads, a critical turning point, and a point of decision. What is most interesting to note, is that it is during this stage that many educators first reach out to other members of the community in earnest. They begin to post to the bulletin boards in purposeful and urgent ways and note the influence that these conversations are having on their thinking, their learning, and their practice.

Cathy—PR 8, 2001

"A part of me knows that I am learning, but I feel like I am lost and don't know where to turn. I do realize that I must be on to something though, but I don't like this feeling ... Right now I am confused and frustrated ... I am getting lost. I don't know what to believe. I think I could find reasonable arguments for all ideas ... I am getting really confused ... One day I think I have it all together and the next I feel like I do not belong in this field ... I am trying to see how all the factors cause people to act in a certain way. For example, how do positive selves guide and motivate? How do unwanted selves prompt avoidance? I am trying to look for the teachers who influence the others to try to observe what they do to get the power to influence the group. I am also interested in the idea that group achievements and social change are rooted in self-efficacy.

Teaching is a lonely job. I am trying to see [teachers] as people who are doubting themselves and therefore resisting change because it is frightening. I think this goes back to the idea that people strive to control events that affect their lives. These teachers are trying to control their own classrooms. I guess the independence that is such a necessary part of being a teacher can be detrimental. As I interact with [the] teachers, I am trying to figure out what it is they believe about themselves and their students to figure out why they may be resisting. So the reading I am struggling with has given me some things to think about in my practice. The support that I need for my own understanding of the reading process has not changed much this week, but I have some new considerations to search for which should give me some new applications to my context. I still think this is a difficult process to endure ... I still need to reread the efficacy pieces because I am having a difficult time understanding what they mean. But I have been able to try to look at teachers realistically and see the collective as well as personal efficacy issues that may be at work. So I think my learning has helped to temper my strong push to make them hear me. I know that many will not this year. But I can continue to try to be like a little bee buzzing around for when they are ready."

Cathy—PR 9, 2001

"I do not know what area specifically to focus on. There is so much to take into consideration ...

Transferring this to my practice is more difficult ... I suppose what I am learning is helping some." [56]

6.4 Community stage

Educators in the community stage embrace the idea of becoming informed skeptics. They often speak of being "retroactively embarrassed" by what they used to believe and how those beliefs prompted them to make indefensible decisions of practice. When they arrive at this stage, educators become true members of a learning community. They exhibit sharing, increased meaningful participation, and fellowship. Educators begin to trust themselves as self-directed and intentional learners. They exhibit creativity and risk taking as they play with ideas, consider options, and experiment within their learning and their practice. [57]

In the community stage, educators not only commune with each other, but they begin to see how ideas commune. They are keenly aware of the sophisticated nature of concerns of practice. They vigorously seek ways to share their learning—both in pursuit of their own learning agenda and to support others in the pursuit of their learning agendas. They acknowledge the influence of other points of view from theory, research, and practice. Here learning and practice become reciprocal.

Cathy—PR 10, 2001

"I did not expect to have this field of study be so broad and confusing. But it appears that every piece I read either contributes something new to my thought process or adds to my existing knowledge. ... Other bits of information are leading me to more thoughts and quests for more information ... I have found that as my knowledge about reading grows, my concerns will push me into other concerns ... I must continue with finding the answers to questions, but I do not think I know all the questions yet either ... I think my learning has increased my efficacy. I no longer worry that I do not have the background knowledge about reading that I think I must have. I also realize that the district's goals are okay.

I do not need to prove to myself that they are grounded in solid research. I am able to defend the ideas to skeptical teachers instead of my skeptical self. I feel as though I do belong in my position, where before I was a little intimidated ... I still am learning that I cannot force any teacher to believe in what I know. Somehow, they must learn it for themselves. I am thinking of trying to begin a research group. A group of teachers to get together to discuss research articles that I can facilitate."

Cathy—PR 11, 2001

"I began my search for basic understanding, I think I was looking for a cookie cutter model of reading instruction or a recipe. You put in so much of this and a little more of that and poof, you have a reader. What I have learned is that reading is much more complicated than I originally anticipated. There is contradictory research information, some supports phonics instruction some do not. I still believe the truth is somewhere in between. I have figured out, from my reading, that children who have rich oral vocabulary exposure early in life will become better readers than children who do not have this same type of exposure. But these children usually also have lots of good models of adult speech, as well as 'reading' lots of books ... I have many thoughts racing through my mind about this subject ... I have been posting some

insights and questions on the learning BB and will continue to do so this week. I think all these things are helping me to understand what we can do to assist children in learning to read. My context is exactly that, I am hoping that I am able to make some small difference this year for a few teachers ... I think at the beginning, I really thought that learning to read was like a recipe, a cup of decoding, a dash of sight words, 3 cups of comprehension strategies and viola! A reader would appear. I now know there is no such recipe. Learning to read is a difficult task, even for the most prepared children. I am happy to know that not even the experts have all the answers. I thought there was some magic formula that I just did not know about. But, I do know much more about reading because of the research that I have been conducting ... I am beginning to wonder about the validity of our current grading practices. In essence, a grade does not tell a teacher or parent much information about a child. I think with all the possible problems children could have with reading, decoding, automaticity, comprehension, we need to get more information to help the children succeed. I guess I am thinking this due to what I read. The research is pushing me to see to how inaccurate assessment is not helping the children."

Cathy—PR 12, 2001

"When I began ... I did not understand how we acquired the skill of reading. I felt that in order to give myself the confidence and credibility that would be essential for doing the job, I would need to understand reading as completely as I could ... Now that I feel more understanding in myself about reading, I am beginning to expand my thinking. I have been thinking about how we build knowledge. I did not think I would find what I have ... I have been interested in reading instruction for a long time, but this is the first time I have really learned anything ... I am also finding myself very excited by all this now ... Every bit of information I come to understand is intimately related to my practice. I do not think I could have done my job without this reading and grappling with the ideas I have discovered."

Cathy—PR 13, 2001

"I think I do need to reread this piece to understand it a little more. That is the luxury of this ... I can reread what I need for my learning ... My practice is getting stronger ... I have also discovered that I feel much more confident ... I feel more professional. I check the research myself, not just blindly follow."

Cathy—PR 16, 2001

"... I need to learn so much more. My initial assumption was that there was a 'reading recipe'! I do not believe I received the proper preservice instruction about reading. Once I began to teach, I discovered that there was little time or support in my district to learn more about reading. I felt like there was some special club of reading knowledge, but I did not have a key. I believe I am now on a path to understand more about the acquisition of reading. I now think that most teachers are like I was, we do not really know the best methods or theories to follow and we do not look for the research to reinforce our practice in the classroom. At first I made an attempt to research all the components of reading, but realized that was too much. I was challenged by many in TIL to stretch my understandings during my search, which first I resisted, but has helped my to discover what I now know and believe to be true." [58]

7. Implications and Considerations

As we examine our data and our interpretations closely, we realize that there are implications and considerations for both the educational and qualitative research communities. Our considerations for the educational community are both theoretical and practical, and our concerns for the qualitative research community are primarily methodological. Each area will be addressed in turn. [59]

7.1 Theoretical considerations

Three qualities of online discourse contribute to its ability to transform individual and community consciousness in ways that are unrealizable in face-to-face interactions. First, in the multilogue (SHANK, 1993; SHANK & CUNNINGHAM, 1996) the artificial properties of writing that "heighten consciousness" by providing "not only proximity but also distance" (ONG, 1982, p.82) fuse with the give-and-take intimacy of oral communication. The resulting discourse retains a certain "prima facie" character. That is to say, participants present real identities to each other. In a multilogue individuals can be challenged to defend their assertions. These challenges can occur days (or months or minutes) after the original message is posted and still retain the give-and-take immediacy of face-to-face conversation. Yet, within this intimate exchange, writing forces the mind into a "slowed-down pattern" that causes the mind to examine and reorganize its natural thinking processes (ONG, 1982, p.40). [60]

Second, online discourse is situated in a community of practice. What's more, this community not only generates physical artifacts of its thoughts and conversations, it also chronicles them with a time stamp and, in the case of threaded discussions, the position those conversations hold in the multilogue. It is impossible then to disconnect the individual learning, thinking, and reflection from the evolving norms of the community. Simply put, online discourses influence and are influenced by the lifeworld of the online community since they occur within the real life progression of events within the community of practice. To examine it, you must examine the culture of the community at the time the discourse occurred. [61]

Finally, reflection in an online learning community is a dynamic exchange—less linear, more chaotic, and influenced by the discourse of the individual within a community of practice. In innovative learning communities like TIL, long held personal beliefs bump up against the shared and personal beliefs, of others in interesting and unexpected ways. Moreover, individuals can "retrace" their authentic thinking and their learning since it remains frozen in time and context in multilogues. This phenomenon thrusts reflection into a contemporaneous process both private and public, intimate and detached, spontaneous and contemplated, and immediate and delayed. [62]

Online discourse has a distinctive nature that must be recognized by those seeking to understand the findings lurking there. [63]

7.2 Practical considerations

Innovative online learning communities, like TIL, differ from traditional face-to-face learning communities in important ways. Understanding those differences and how they impact online teaching, online learning, and online environments becomes a crucial element for those engaged in the practice of education using the Internet. The three are inexorably linked. That is, examining the processes of teaching, learning, and reflection in an online community requires constant attention to the influences that each process has on the others. [64]

The online environments that we engineer have a significant impact on the discourse, the learning, the reflection, and the interaction of the community members that they support. One of the keys to TIL's influence on community discourse is that it is expressly designed as a learning environment rather than as an instructional environment (MOSS, 2000). That is to say, learning, rather than instruction, drives the members' interactions within the community. Specifically, community members are free to collaborate in intentional ways and to follow the natural rhythm of their learning agendas. They can choose to stay in one place for a while, to reread a web resource or a bulletin board post, rather than hurry to the next assignment. They are free to lurk—to "listen" to the online discourse of their colleagues and to post when they are motivated to do so, because it is their own unique learning agenda that steers their actions. [65]

Because we are intimately involved in the design of the online community that we are studying, the design decisions influence and are influenced by the learning of individuals and the community (MOSS, 2000). Our experiences provide a unique point of view for the design of professional on-line learning environments. It is vitally important to understand and yield to the influences of the environments that we create—environments that are in turn shaping our identities as designers. In fact, the perspective of situated cognition as a process that shapes the learner must be applied to online learning environment designers, as well as the educators they intend to serve. In the same respect, our identities as researchers of online learning and discourse shape and are shaped by the communities of practice that subsume our efforts. We must commit to practicing what we preach by recognizing the learning that we do in our own work and the ways that the contexts of that learning shape us. Ultimately we bring those identities back to our designs and research in a recursive fashion. [66]

Finally, it seems that the true power of online learning communities lies in their unique online discourses—a mode of communication that cannot be replicated in face-to-face environments. Building an online environment around that insight appears to offer significant advantages to the idea of simply importing old educational models to new online homes. [67]

8. Conclusion

We have mined the discourse from a unique online learning environment known as TIL in an attempt to reveal the nature of learning, the learner, and the learning community in this online setting. We have argued that the properties of online discourse point to a mode of communication that is neither oral nor written, nor a simple combination of the two. Rather we have argued that the resulting mode of communication represents a post-literate technological change of language itself. This change warrants shifts in our theoretical, practical, and methodological considerations. [68]

Our study represents a larger research program on the natural history of online worlds and the ways that close readings of those histories can help us understand online worlds and ways that we might create online worlds for seamless and meaningful discourse. [69]

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