

Affordances of a VR World as a Place for Learning:
Discourse Patterns and Contextualization Cues Framing Learning Experiences for Adults
in a Real-time, Text-based, Virtual Reality Setting

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This paper is part of a symposium focusing on the use of online resources for teachers' professional development. On the panel the notion of "professional development" ranges from informal conversation to formal continuing education classes and full graduate degree programs. So too the notion of "online settings" varies from asynchronous means such as listservs and newsgroups to synchronous "chat," and both. This paper offers results of preliminary analyses of discourse in an online degree program for teachers as part of an examination of the value of virtual places for instructional conversations.

Online learning can be powerful. Pepperdine University faculty who teach online declare they know their online students better than their face-to-face students. The students declare they know their colleagues better. Everyone declares deep learning is happening and everyone declares that, except for the reading and workload, it doesn't feel like graduate school. What is going on, online?

Typical teacher education classes and professional development workshops offer learning as "school-learning," that is, cognitive transfer of text-based knowledge under the guidance of one expert telling many novices. Text and teacher voice predominate. A number of educators have offered "good" reasons for why this is. But, politics and power relations aside, there are strong "frame factors" such as "curriculum, time, number of pupils, and the classroom as a physical space" that keep "the traditional model of teaching and classroom interaction a necessary 'habit' or 'theory in use' by means of which teachers control the turbulent life of the classroom" (Miettinen, 1998). This is often an apt description of college teaching as well, but it need not be (Miettinen, 1998; Wilson, 1993).

Pepperdine University's online MA program¹ attempts to recast graduate education as participation in a community of practice, in this case, in educational technology (Lave & Wenger, 1991; Wenger, 1999). This is done in part in the redesign of the curriculum, but that redesign relies upon the affordances of online tools to make learning activity a collegial, collaborative, participatory, and interactive experience in a

community of varied expertise. The Pepperdine M.A. program makes use of both asynch and synch. communications, but this paper focuses on the analyses from synchronous or real-time "chat" mode. Real-time online talk has been largely neglected by educational researchers. In examination of online learning, they steer clear of chat spaces, instead developing and studying the use of asynchronous communication networks such as email, listservs, and discussion boards (Davis & Brewer, 1997; Levin, 1990; Riel, 1990; Ruopp, Gal, Drayton, & Pfister, 1993). This paper examines the effect of moving instructional conversations out of the classic "classroom," and into a place that shares more of the qualities of Oldenburg's great good place to give rise to a different discourse, a discourse of practice among colleagues with common interests and diverse experience and expertise. The virtual world, real-time jointly constructed virtual space supports this effort.

Thin Chat: Disembodied Talk

Though it predates the world wide web, the 'chat room' is most popularly embodied in today's America Online chat rooms. Typically these chat rooms support names or 'handles' spewing lines of text. But there is no non-verbal embellishment in the environment other than what the participants generate as narration in their own typed

text. These chat rooms are barren. Nothing exists before the participants create it on the fly, and when they leave, there is no enduring residue of the experience.

Instant messaging is a second kind of 'chat' interface which allows Internet users to create lists of online friends with whom they can exchange instant text messages when those friends are online. This is actually a rather slow conversational device, more like asynchronous exchanges than true chat. The two widely used IM programs, ICQ and AIM, allow users to open a chat window and even invite in other friends to chat in that space. Those chat windows resemble AOL chat rooms.

Chat environments are generally neglected as learning tools. This seems to be the result of two independent misperceptions. First, chat is a resource-poor environment for conversation, especially for "intellectual" conversation (Palloff & Pratt, 1999). After all, it cannot support critical prosodic elements: intonation, volume, stress, variations in vowel length, phrasing, and other acoustic features that support meaning (Gumperz, 1981). It deprives participants of access to each other's facial expressions, gestures, and body language, all of which are considered critical devices for assisting in meaning-making in conversation. Thus it only offers written talk, constrained further by the general etiquette of turn-taking which requires short bursts of text no longer than one or two lines at a time. Truly it is a thin version of conversation that it offers.

A second objection to chat rooms as learning spaces must be attributed to the still dominant cognitive theories of how people learn, which do not place "conversation" at the top of the list of strategies for knowledge acquisition.

Fat Chat: Situated Conversation

Unlike the other two chat mechanisms, the online virtual world is a rich setting for conversation. What it lacks in some dimensions (such as acoustic cues) it makes up for in others, specifically the power of place and stuff support sense making. Referred to variously as MOOs, MUDs, MUSHes, MUSEs, and MUVES, these programs support real-time, multi-user, text-based worlds furnished with objects that exist independent of the typed talk of the participants. People who have engaged in interaction in online communities or in persistent online groups generally speak of those experiences as powerful, shared social constructions, treated as some sort of hybrid of reality and fantasy². Much lore and loyalty surrounds these programmed neighborhoods, generated in part by the power of shared construction (e.g., LambdaMOO, LinguaMOO, MediaMOO, DragonMUSH among others). Though originally text-based, relying on participants' descriptive powers, these meeting places have proved popular enough to spawn graphical versions that offer avatars as placeholders for human participants and images of rooms and objects with which participants' can interact.³

Since 1994 the Pepperdine graduate school of education has maintained its own MOO shell for student and faculty use. In 1998, with the increased 24/7 demands of the online M.A. and Ed.D. programs, the graduate school subcontracted with SRI for expanded access to their enhanced version of the MOO program, Tapped In. Pepperdine has its own virtual campus building in Tapped In. It is six stories high, housing classrooms, student and faculty offices, and the interstitial spaces of those virtual realities (hallways, elevators, and entryways). [See Appendix 1 for a text description and graphic description of the author's office in Tapped In.]

Graduate students obtain their own offices and decorate them through description and object construction. As a group, teachers in the Pepperdine online programs tend to revel in the possibilities a virtual reality affords them, and relish the possession and development of their office spaces. Most of the objects they create reference worlds other than the classroom: saunas, massage tables, pets, rocking chairs, entertainment devices, pitchers of Margaritas, aquariums, and pictures.

The Relevance of Place for Discourse

Physical settings influence the social interactions that occur in them (Hymes, 1974; Oldenburg, 1989). Consider the adult classroom. Writing tables and chairs exist for the students; it is clear what their main task will be. Moving writing tables into a circle,

or hollow square doesn't over-ride the functional message of the furniture. No one mistakes the U-shaped arrangement of desks for an L-shaped sofa in someone's home. Whiteboards or blackboards cover two or three walls. These are generally the teacher's domain, to mark as "important" ideas, notes, or information s/he jots down. No student will be bounding up during class to make a notation on them. No one owns these rooms. There are no personal objects or pictures, except the detritus left by previous groups. There may be a clock; it may work, or not. Off to the corner may be a podium and an overhead projector. Even when not used by an instructor, their very presence indicates the intended direction of conversation in this place. Fortunately, class time is limited in the room. Overstaying or arriving early place students and instructors in competition for space with another class.

In some sense then, classrooms are as barren and temporary as AOL chat rooms. Not only does no one own or live in these rooms, but the students must leave their home and work to arrive at them. This isn't just an inconvenience; it is a psychological shift of identity: at school I am the teacher; here I am the student, writ large. Consider too the implicit meaning of place when teachers must leave their school to come to the university for knowledge and resources about teaching.

It should be no wonder then, that classroom discourse is dominated by what has been labeled the I-R-E or I-R-F sequence: teacher initiation, student response, and teacher evaluation or follow-up (Mehan, 1979; Wells, 1999). Certainly the setting is organized to

support this sort of teacher control over interaction. This instructional paradigm and the setting in which it occurs are vestiges of an acquisition and storage model of education.

Alternative Paradigms; Alternative Places

Pepperdine's online M.A. and Ed.D. programs are based upon a model of learning that has rarely been found in formal educational settings: the community of practice (Lave & Wenger, 1991; Wenger, 1999). Instead this version of the learning process has been culled from studies of work. The "community of practice" (CoP) is organized around some productive social practice, i.e., work, such as navigating, midwifery, adjusting insurance claims, or doctoring (Engestrom, 1993; Hutchins, 1996; Lave & Wenger, 1991; Wenger, 1999). Within a community there is much variation in experience and expertise. Community members share the common goal of expert practice, though they might experience more or less participation in accomplishing it, based on their expertise. Indeed, entrance to the community is based on the acknowledged desire to fully participate in the practice.

Not all communities are successful places for learning. Research on CoPs distinguishes successful from dysfunctional CoPs, largely on the basis of access that members have to knowledge in action: in people, their objects, and activities (Lave & Wenger, 1991; Wenger, 1999). Where there access, learning is more successful for

members. They are able to increase their participation in the practice and experience their growing expertise as a transformation of their identity in the community, e.g., from newbie to journeyman. As members move through the field of practice they influence it as well as learn from it. Everyone is a co-member of multiple communities (e.g., mother, Chicana, mountain-biker, kindergarten teacher, and gardening maven), and the perceptions, metaphors, and practices from one community will always play out in the novice practices of another community as people try to make sense.

Where practice is sequestered, learning opportunities often uncouple knowledge from its use or deny the utility of knowledge spill over from other communities, and thereby make it difficult for learners to make practical sense. Formal staff development for teachers, whether formal course work or in-service workshop, looks a lot like sequestered practice. It occurs outside the actual practice of teaching, and access to experts and expert practice is severely limited by time and occasions.

The Pepperdine online program is deliberately designed to place students in the learning context of a community of practice (CoP), where the practice is the expert use of technology for learning, and practice is valued as the source of knowledge. In order to accomplish this lofty goal, the program needs first to escape the constraints of traditional university educational practice. This has become possible, even inevitable, through the use of several online tools with particular affordances⁴ for reframing coursework in a CoP-like context for learning.

Affordances of Virtual Worlds for Community Discourse

Virtual worlds support a different kind of place for discourse about work. They succeed because they are able to bring landscapes and objects into play in conversation by harnessing the abounding willingness of participants to imagine together (Bruckman, 1992; Turkle, 1984).

People rely on shared understanding of cultural metaphors from the real world to make sense in the virtual one. Familiar objects like blackboards and hot tubs in the settings for online class allow function as conversational props, signaling and supporting meaning in an otherwise unreal setting. Students and teacher make sense of who they are and what is happening at the moment, based in part upon the cues in the setting.

Below are two stories from the same group of students in the same course. Both stories show the role of the landscape and its objects in the discourse. The first story demonstrates how a rather classic classroom feature, the blackboard, can be appropriated by students engaged in the joint construction of meaning. The second story describes the role of objects as contextualization cues as well, only in this instance, signaling a special kind of place for conversation.

Liberating the Blackboard

In Transcript #1 (Appendix 1), the teacher initially calls for a common classroom activity, brainstorming. And so it begins, with the teacher posing a question and students responding, and the teacher following up. It is the classic I-R-F sequence noted above. But here, unlike the university classroom, the blackboard sports additional features and functionality; it operates in ways that it cannot in real classrooms. The students are encouraged to make use of these features in ways that take them out of the blackboard spectator position behind the desk.

The excerpt from the transcript begins with the teacher initiating a discussion of *what it is that mentors do*. The first student calls out a response, *motivate*, which the teacher writes on the board [lines 1-4]. This clearly establishes the activity as one of those 'you call 'em out and I write 'em down' occasions. After a second student offers, *inspire*, the teacher makes a classic f2f classroom move: she puts the chalk down [line 7]. But of course, there isn't really any chalk. It is all text, all mutually agreed upon fantasy. Nevertheless, the teacher extends the classroom metaphor underway when she narrates her own storyline with: *T puts the chalk down a sec*.

The teacher's decision to remark that she is putting the chalk down is significant because it is unnecessary. So we must ask, what is its function in this setting? In a f2f classroom, the teacher who has been writing on the board and then stops and puts down the chalk, would most likely turn to face the class or someone in the class. She would not

remain standing facing the board. This body movement signals a shift in focus away from the blackboard activity of 'listing' to something else. In the online class, this chalk move carries out the same function as a contextual cue to the class to cease listing and re-orient to something else, in this case, to a question she has asked. The teacher's question moves the subject off a bit from brainstorming about mentoring actions to a consideration of where "motivation" and "inspiration" come from. Her question appropriates JenniferU's contributions, and in doing so ratifies them to an extent. But by stopping to explore these terms, she seems to be indicating that they need clarification before the listing can go on.

It is noteworthy that students initially comply the re-orienting cue. Beginning with line 8 students offer responses to the teacher's new question, and the teacher engages with them, indicating that such responses are on target. The I-R-F continues. Students continue to respond to the teacher's question. The teacher has successfully redirected the focus of the interaction. Listing has been suspended in order to pursue the teacher's question that arises from the partial list. In line 13, the teacher asserts an answer to her own question.

So far the online classroom seems to operate like a traditional classroom. It appears that the teacher is assuming the role of teacher-authority by her appropriation of the blackboard as her recording device. She solicits responses, and she uses the blackboard to signify the responses she sanctions by writing them on the board. As the instructional leader, the power figure, she offers feedback on student responses in this way. It is a familiar classroom hierarchy. But, is that truly what is happening here?

Suddenly, a student who has not offered a response yet, writes on the blackboard without asking for or receiving explicit permission [line 15]. The teacher and students give no notice. They carry on in their conversation. Over the next twenty minutes Teri [line 15], Amy [lines 66, 80], and Kass [line 101] will have posted remarks on the board, without overt permission requested or given. Generally this does not occur in face-to-face classroom. Students do not stand up and walk to the board to make notations during instructional conversations, and they do not approach the black board during discussion unless an instructor sends them to the board to carry out some purpose. Why does this occur online and what is its significance? This online classroom no longer appears to be the traditional classroom it seemed a moment ago.

It is possible in the MOO chat environment to write on the blackboard with minimal disruption of the ongoing scene. The student need not stand and move to occupy the teacher's domain. To write on the board a student merely types, unseen by others, for instance: *writeb motivation*. The room reports that the student has written, telling the class: *TeriN writes on the whiteboard*. Anyone present can choose immediately to read the board without generating text intrusions into the public conversation.

There are at least two possible interpretations of these moves, and by further analysis of the context or activity they are embedded in, it is possible to see which fits the discourse model in this virtual classroom.

It is tempting to consider the whiteboard to be represent a new participation structure for interaction in the virtual classroom. And, indeed, it is. In the context of ongoing discussion, this move offers a novel way for participants to get the floor. They can offer their ideas, but others in the group must look to read them. These offerings are not "in play" in the conversation as they would be if they were spoken-text. It would be tempting to adopt this view, but the context suggests something else. And, it seems unlikely that someone who feared speaking up in the conversation stream would yet be bold enough to assert him or herself on the whiteboard.

By removing blackboard access from the teacher's exclusive control, the MOO setting has altered the power structure in the classroom, and in this class session, students choose to take advantage of the new arrangements. When Teri posts [line 15], or tries to (she fails with the command at first), the listing has just been interrupted by the teacher's reorienting move to a question. The discussion continues without a return to listing for several screenfuls (approximately ten minutes). There is a joke based on a typo [lines 62-65] and a lull in the conversation. Amy tries to write on the board and fails to do so [line 66]. Look what happens: the instructor offers her help [line 74]. Clearly the instructor is receptive to student use of the blackboard.

The instructor indicates the collegial nature of the blackboard listing actions in several ways. She helps a student figure out how to write on the board [line 74], while she signaling her own dismay at having neglected taking notes herself [line 77]. This can

be taken as a bid for assistance in recovering the worthy points of the conversation. She also accepts, without removing or changing, all postings made on the board. And finally, she uses an inclusive "we" in remarking on the listing behavior [line 102].

A look at the blackboard [lines 81 to 89] reveals that the teacher and students have been co-constructing notes from the discussion on mentors. The teacher has written two lines on the board [line 85-86] that can be traced to Jeremiah. Amy, now able to join in, has added her own contribution [line 87]. And finally, Kass posts one that is traceable to the teacher's remarks [line 88].

Thus it would seem more likely to interpret students' uninvited use of the blackboard, not as a new participation structure for the shy, but rather as a shared tool for co-constructing group memory. This interpretation is further supported by the additional functionality of the virtual whiteboard as a shared text tool. In other class sessions we see students make use of the blackboard options to "print" and "email" themselves a copy at any time, simply by issuing line commands to do so.

In this second blackboard case, the access to and functionality of the board places it in a different role in the virtual classroom than it typically fills in the real world one. The additional features of ease of access to posting and obtaining copies of the postings suggest use of the blackboard as a tool for collaboration, and a cue that shared use is not merely possible, but expected.

The Hot Tub as a Great, Good Place

In the university classroom and the in-service workshop, the end of the formal instructional session is the end of time together. Though a student or two may steal a few extra moments with the teacher as s/he gathers up possessions, those moments are brief, and semi-private. They are bids on the students' part, not offerings of additional conversation made by the instructor, and often there is an awkward jockeying for position among competing students bidding for extra time. After class or workshop, students depart in a hurry, to get home or back to work. The imagined, great coffeehouse conversations are luxuries of time that only fulltime college students can afford.

Oldenburg (1989) bemoans the loss of such informal public spaces in the United States, places like the ubiquitous neighborhood pubs of the U.K. These places that are neither work nor home, are "third places" where people can relax and interact in the relative safety of "regulars" and shared rituals. The lack of third places probably reflects the lack of time people have, or believe they have, to spend in the luxury of idle conversation.

Third places aren't intended to be places of apprenticeship or learning, but they are intended to serve their local community and its need for affiliation, interaction, and support. If we substitute Wenger's community of practice for Oldenburg's local neighborhood as community, we begin to get some ideas about how "place" might matter

in a community of practice as well, especially when that practice is a fairly isolated experience in the field.

In considering the role of virtual place as a third place for online communities of practice, it seems rather critical to background the formal traditional classroom and foreground the everyday workplace setting as the context for learning conversation. When students log in to class from home or work, they are participating in discussion as they sit literally submerged in their local context. Teachers logging in to class from home do so from their workspace, surrounded by their student papers, school paperwork, textbooks, grade books, and so on.

Additionally, the virtual world environment allows other kinds of objects to emerge and frame activity in useful ways. As noted above, teachers in the graduate program have their own offices in Tapped In. They may decorate them through description and object construction. For most teachers, this is the only personal office they have and they seem to enjoy it. It is not unusual to log on and find students in their offices, alone, or with one or two colleagues. Now Oldenburg's third place and those late night coffeehouse conversation become possible.

The office, and the non-classroom objects that can fill it, are both active components of the interactional scene. In every single transcript there is more than one occasion in which objects are called into play in the scene and serve as contextualization cues in the ongoing activity and conversation. The second online story, below, describes

the role of objects as contextualization cues that create a special kind of place for conversation. In this instance, the object is a hot tub, and it supports the construction of a conversational space that is not “class” but nonetheless engages the same topics and people. The result is an opportunity to debrief, to reflect, and to try out ideas.

Transcript #2 (Appendix 2) comes from the end of a difficult class session. The teacher had begun by initiating a discussion on differences among people and how they might affect mentoring relationships. The group discusses the topic with interest; everyone speaks more than once on the topic. The discussion lasts for approximately fifteen minutes. But the teacher expresses dissatisfaction with the discussion and explicitly moves it along to a discussion of the group project. The students oblige and follow. Another fifteen-minute discussion ensues, during which everyone speaks multiple times on the subject. But, the conversation wanders. The instructor makes a typo that turns out to be quite funny. At that point, everyone seems to stop and take a breath. There is a palatable silence that runs a full minute, and is remarked on by a student.

Transcript #2 picks up after this when the joking resumes for a few turns. The teacher recognizes a pop tune as the referent for humor underway and joins in [lines 1-10]. A student suggests the class isn't doing too well [line 5]. The teacher, who has been joking with the students too, seems to acknowledge that they're going nowhere with the topic [line 11].

After the levity break, students begin to explain. The teacher acknowledges the stress level is high, both from the API (Academic Performance Index) public school rankings, which were released that day in the newspapers, and from the fourth night in a row of online class [line 16-21]. A brief discussion of the API ensues [lines 27-31] as the teacher tries to relocate the class to the hot tub [line 28]. Sam's remark suggests she sees the hot tub as precluding the continued discussion of the group project [line 33], but the teacher reiterates and personally moves to the hot tub, effectively making students follow her, since they will not be able to hear her unless they too are in the hot tub. She personally moves to the hot tub, effectively forcing students to follow her, since they will not be able to hear her unless they too are in the hot tub. The students hop in [lines 34-45].

Though there is no real hot tub, students and teacher choose to express the sensation of one [lines 39, 43, 46, and 49]. The teacher hands out beverages [lines 47, 50-51] and puts on music [line 55]. This would seem to signal the end of official class time since none of these virtual activities is within the mainstream of classroom culture.

Yet, as Judi sits down in the hot tub she shares that she is still reflecting on the mentoring discussion. She declares that she has had an insight during class [line 31]. The conversation that ensues is on topic and focused. Other students are drawn in by Judi's remarks. They comment on and extend her story, weaving their own mentoring stories into the mix. The longest conversation exchange of the night occurs, running around 20

minutes. Everyone is involved. Two other students share their mentoring stories. After Eric finishes his tale, the teacher attempts to connect this long and rich conversation with the earlier pre-hot tub ones.

T [to others at the hot tub]: so...how do we get this into the revised handbook

JesseT [to others at the hot tub] This takes us back to the convo from the beginning of class.

The students continue for another few minutes. The time is 8:32 p.m., right about the usual ending time. A student remarks on her fatigue and the instructor pulls the virtual plug.

HollyN [to others at the hot tub]: ok I'm falling asleep in the chair

T pulls the plug on the tub

JudiF [to others at the hot tub]: waaaaaahh

T [to others at the hot tub]: let's call it a night

In typical form, the conversation winds down slowly as the students begin a ritual known as "opening up closings" (Schegloff & Sacks, 1999) in which folks negotiate their exits. No one wants to be the first to leave for fear of missing something that might fall out from the banter. Eventually the instructor throws them out. One student stands and the rush out the door begins. Notice the continued engagement in the fantasy.

T [to others at the hot tub]: okay peons...out of the tub.

JudiF stands up from the hot tub..
JayG stands up from the hot tub..
JesseT stands up from the hot tub..
JenniferU stands up from the hot tub..
T stands up from the hot tub..
JosephRB stands up from the hot tub..
JudiF says, "I look like a prune."
JenniferBC stands up from the hot tub..
HollyN stands up from the hot tub..
JosephRB towels off.
Sams stands up from the hot tub..
EricAS stands up from the hot tub..
T hands out towels.

This group has participated in a good on-topic discussion after moving *en masse* to a make-believe hot tub, after having difficulties engaging in formal class topics, after having a “rough week.” But, no one really goes anywhere; nothing really changes. Yet people express the release of tension (aaaaahhhh) and take up again the serious topics of the class, seemingly ready to engage at a greater level of concentration and depth of explanation. How can this be? Or more importantly, how does this come to be?

To answer the question requires a consideration of the functional meaning of the hot tub in that setting. While it was fairly easy to see the transfer of the same functional meaning of the chalk and blackboard moves described above, the hot tub is a bit more elusive. There are no real world analogs from the classroom to consider here. A hot tub is an object you would never find in a classroom in the real world, and you probably wouldn't even find it in almost all the online chat classrooms you encountered on the

'Net. A hot tub belongs in someone's backyard or alongside the pool at a hotel. It is a place where people generally sit and soak and enjoy the hot whirling water. It is a place where people relax and chat.

Re-situating the class discussion in this environment signals the students that they are "off the record" now, especially given the way in which the teacher calls them to the hot tub (boldface mine). Though this is no longer "class" time, no one leaves. No one misperceives this as the end of class or as an optional exit point. However, once in the hot tub, the initiating remarks come from a student who wishes to share an insight she's had. Her remarks are personal with regard to mentoring. She is not trying to draw generalizations from her experience. She is reflecting on her understanding and role. Eric and Holly also share, unprompted. They are having trouble setting up the mentoring project they are undertaking for the class. Though their concerns seem to be different, they share a common thread: they are personal, current, and urgent.

Perhaps the hot tub cues the end of official class and the beginning of a non-judgmental, informal interactional space where it is safer to risk talking about things that are confusing or things that are going awry in project work. In moving to the hot tub and declaring (emphases are mine), "let's **just** sit in the hot tub and **swap stories** about the week, **mentoring or not**," the instructor has hung an "off duty" sign around her neck.

It is difficult to imagine what sorts of comparable real world cues are available to demarcate such a space in the graduate classroom or staff development workshop. An instructor can lean forward and earnestly suggest to students that they all set aside the classroom enterprise for a while to have a friendly discussion. But the overbearing presence of desks, whiteboards, podiums, overhead projectors, and the classroom box itself, probably make it difficult for anyone to take that seriously.

The hot tub frames a special time in the virtual class environment. Students are "hanging out" with no time limits. They are soaking in the hot water and sipping beverages of their choice. Conversation is unforced. Still they are students and there is an instructor in their midst but the hot tub has redefined those relationships. There are probably real world classroom analogs but the conventions of conversational turn taking and the architecture of power in the classroom mitigate against them.

Something Old, Something New

This paper has examined the elements of the virtual class when the classroom setting is embodied in a virtual world of imagined possibilities, some old and familiar, some new and unusual. Yes, this examination reveals that people can bank on shared metaphors from the real world classroom to negotiate the floor in the online synchronous classroom. But much more importantly, the analyses described here reveal "new"

metaphors in the online synchronous classroom that have no analog in the real world teacher education classroom. The virtual blackboard and hot tub objects contribute to important variations in the instructional setting, variations to which students are consciously and unconsciously responsive. The features of the virtual world provide opportunities to realign the “classroom” with the beneficial features of learning in a community.

Decades of research and personal experience in classrooms and formal staff development settings inform real world, face-to-face professional development opportunities for teachers. But knowledge of online learning is extremely limited, and most of the work that has been done is already dated by developments in the online tools themselves. Before diving in to online offerings for professional development of teachers, would-be developers must understand the design features of online learning and how those features affect the sense-making endeavor. This presentation revealed a tiny piece of a tip of an online learning iceberg.

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NOTES

1. The Pepperdine online M.A. in educational technology is finishing its second year as an 85% online program for teachers in educational technology. Though predominantly online, this program requires students to meet face-to-face on three occasions over the 13-month duration of the program. In July, before coursework begins, students attend a five-day VirtCamp intended to bond a cadre group, establish the program vision, and ready students to use online tools for interaction. Second, at the midpoint of the program, students convene in conjunction with a regional technology conference, typically the Florida Educational Technology Conference. And finally, the entire cadre returns the following July for closure seminars, and to prepare and conduct an exit exhibition of their year's work.

2. More recently virtual worlds have been put to use to support online learning, though predominantly for children (e.g., MIT's MOOSE Crossing, NAU's MariMUSE and CalTech's Whyville). Though increasing numbers of postsecondary MOOs exist, they mostly support college course-specific explorations, such as the practice of a foreign language (Syracuse's MundoHispano MOO) and the design of period architecture (Miami University of Ohio's MiamiMOO) (Haynes & Holmevik, 1998). There are also a few

MOOs that serve serious professional communities, for instance, LinguaMOO, for rhetoric and composition, and BioMOO for research biology (Haynes & Holmevik, 1998).

3. Examples of graphical interface MOO-like virtual worlds used in education include:

The Palace (<http://www.edupalace.com/>), Whyville

(<http://www.whyville.net/top/index.html>), Tapped In (<http://tappedin.sri.com>), among others.

4. The descriptor “affordance” was coined by Don Norman to describe object features that beg the use of the object (Norman, 1988), just as a shoulder-high flat panel on the side of the door “tells” you that the door opens by pushing.

