

Establishing a Community of Learners: A Case Study of a University Graduate Orientation Program for Online Learners

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Abstract

Following the theory that a community of practice must be comprised of three elements: domain, community, and practice (Wenger, 2001), this case study examines the extent to which a university was successful in establishing a community of learners in their orientation program for online graduate students. Specifically, it explores the objectives of the orientation, identifies critical questions involved in the design decisions that are made, explicitly or implicitly, analyzes the success to which goals are met, and provides recommendations for future planning based on this research.

Tech Camp is a face-to-face orientation experience for students entering the Pepperdine University doctoral program in educational technology, a program “designed to prepare leaders in the field of technological applications and innovation in the world of education and business” (Pepperdine University, 2003, ¶ 1). One of the primary objectives of Tech Camp is to establish a community of learners out of a group of newly enrolled students.

In July 2001, 23 students with domain experience in leadership and learning arrived at Tech Camp in Culver City, California, to establish themselves as a community, learn the technologies supporting their participation in the online environment, and become familiar with the details of the program’s coursework, logistics, and available resources.

This case study examines the extent to which that Cadre 7 Tech Camp was successful in establishing a community of learners, taking into account the theory that such a community of practice must be comprised of three elements: domain, community, and practice (Wenger, 2001). More specifically, it explores the objectives of the Tech Camp experience, identifies critical questions involved in the design decisions that are made, explicitly or implicitly, analyzes the success to which goals are met, and provides recommendations for future planning based on this research.

The ensuing data will reveal that while the Tech Camp for Cadre 7 was successful in fostering the initial establishment of a community of learners, it was not as effective in facilitating the community’s shared learning of the technologies required to extend the community’s practice to an online environment. Additionally, it is not evident that their incipient cooperative social system constituted, in fact, the development of their practice, defined by Wenger as “ways of dealing with the problems typical of their domain,” that is, one supportive of

online collaboration, knowledge management, and leadership in education (as cited in DeCagna, 2001, p. 6).

It is the authors' conclusion that the face-to-face experience of Tech Camp supports the establishment of a community of learners among the newly enrolled members of an entering cadre. However, our research indicates that the program must be systematically designed to facilitate learning of the requisite technologies in situated context to levels commensurate with the demands of their ongoing online practice.

Background and Research

Communities of Learning

In a recent interview, Wenger defined three important components of a community of practice:

A community of practice really must have three elements in it: domain, community, and practice. The first one is that it must have a domain—a specific area of expertise that members share. The second thing that you want to have is a community—a set of people who interact with one another, who engage with one another, who talk with one another, who think together and develop relationships with one another in that process. And the third important element to have is a practice—ways of dealing with the problems typical of their domain—that is developed over time. (as cited in DeCagna, 2001, p. 6)

Lave and Wenger (1991) considered this definition in their study of a variety of communities demonstrating that social activity subsumes learning (p. 29). This definition can therefore be applied as well to communities whose particular practice is learning itself. The cadres of the Pepperdine educational technology doctoral program are such communities. Their members seek to participate in this community and are selected to do so because their domain of expertise is learning. Their community activity is a practice that focuses on learning about learning and learning how best to learn. Their environment for participating in this activity is a blend of face-to-face campus-bound events with synchronous and asynchronous online interactions delivered over the Internet.

The Challenge of Distance Learning

Such community-based distance learning programs offer real benefits by obviating geography; however they create de facto “absence of physical space,” “management difficulties,” and “unsatisfactory interaction” (Foegen, Howe, Deno, & Robinson, 1998), all of which diminish collaboration and community. Kollock asserts that “the key challenges the Internet community will face in the future are not simply technological, but also sociological: the challenges of social interaction and social organization” (1996, p. 1). Students who do not share a physical environment and work together only in an online environment face significant challenges in establishing community. “In the opening weeks of distance courses, there is an anonymity and lack of identity which comes with the loss of various channels of communication” (Smith, Ferguson, & Caris, 2001, Data Sources section, ¶ 12).

Roschelle (1992) maintains that “understanding the potential power of truly collaborative technology requires re-examining individualistic assumptions about experiencing, knowing, and

learning” (¶ 2). Without measured and deliberate application of pedagogical design, collaborative technologies can inhibit learning rather than enhance it. While distance learning can emancipate students in distant and remote locations from geographic, economic, and social constraints, it can isolate students from their community and thus offer an educational experience inferior to that of the traditional classroom. A review of current studies of online or distance learning programs reveals that the development and growth of a community of practice is vital to the success of distance learning. Consequently, design of distance learning programs must focus on identities and modes of belonging.

The degree of membership or legitimate peripheral participation, Wenger suggests, reconciles the individual with the collective. It is this sense of belonging and ownership that nourishes the community. Kahl and Cropley (1986) found that distance learners differed from face-to-face learners in that they felt more isolated and experienced lower levels of self-confidence. As a result, successful distance learning community building efforts include naming the community (Herrmann, 1998), assigning team-based substantial projects (Shneiderman, 1994), and using class members’ names in bulletin board messages (Poole, 2000). Hence, the principles that lend themselves to quality face-to-face learning environments are parallel to those deemed successful in online courses. However, as shown in Kathleen King’s (2001) case study, the integration of online conferencing with face-to-face classroom learning allowed for a broader educational experience.

Blending Distance and Face-to-Face

This mode of collaboration is substantiated by Rodrigues (1999) in her study of an online masters course. Her findings reveal that students developed a connection in the face-to-face contact time that positively influenced the online community:

It should be stated that the fostering of group dynamics at the start of the course, during face-to-face contact sessions, enabled students to build peer rapport. This rapport encouraged them to communicate candidly through the online forum. Hence the discussions that followed online were possibly a consequence of the camaraderie and association that developed during the face-to-face sessions. (p. 269)

Thus, it has been substantiated that a face-to-face component in the distance learning program is vital to establish, maintain, and evolve a virtual learning community of practice capable of transcending the limits of time and space through technology.

Establishing Community and Learning a Practice

As with any community of practice, a learning community must find common ground. When first establishing itself, it must reconcile, negotiate, and transform that particular triangulation of the community, the individual identities belonging to it, and the knowledgeable skills they are practicing and learning (Lave & Wenger, 1991). T. King (2001) points out that this transformative process depends on the degree to which the members feel a sense of belonging and are aligned with the community’s goals. When affected successfully, “individuals commit themselves to their own growth through the growth of the collective” (p. 2).

Cadre 7, like other cadres before it, faced this challenge of establishing their own community anew, yet even this was not without context. Cadre 7 was from the outset operating

in a “network of practice” (Brown & Duguid, 2000) comprised of previous cadres and their members. This network and its constituents have “practice and knowledge in common” even though they remain mostly “unknown to one another.” Brown and Duguid distinguish between networks of practice and communities of practice. They describe networks of practice as social systems that neither act together nor produce knowledge in concert. They “can, though, share information relating to the members’ common practices quite efficiently” (p. 142). In contrast, communities of practice are

relatively tight knit groups of people who know each other and work together directly. They are usually face-to-face communities that continually negotiate with, communicate with, and coordinate with each other directly in the course of work. And this negotiation, communication, and coordination is a highly implicit, part of work practice. (p. 143)

Thus the Tech Camp program for Cadre 7 included the participation of members of Cadre 6 who shared their mastery of the practice that would soon be common province with the new Cadre 7 members. In their own reference to Lave and Wenger, Brown and Duguid (2000) underscore that learning means belonging to the community and living its practice as a way of coming to know what to do and how to do it. This stands in contrast to learning as merely acquiring knowledge or skill. Theoretically, by observing, participating in, and then modeling the practice of the members of the previous cadre, the new cadre members develop “the disposition, demeanor, and outlook of the practitioners” (Brown & Duguid, 2000, p. 126). In doing so, the program seeks to impose “the lived-in world of engagement in everyday practice” (Lave & Wenger, 1991, p. 47) on the new cadre members.

Designing for the Facilitation of Learning

Hanks (1991) points out precisely that the consequence of separating instruction from authentic activity is the bifurcation of learning from performance. The question arises, then, as to how one designs an environment that is being, rather than merely imitating or simulating, the lived-in world. Wenger (1998b) defines design as “a systematic, planned, and reflexive colonization of time and space in the service of an undertaking” (p. 228), cautioning that “learning cannot be designed: it can only be designed for—that is, facilitated or frustrated” (p. 229). Effectively, design in this case requires engaging both cadres in their practice as they occupy, however briefly, the same time and space. This addresses a critical and complex issue relating to the coincidence of initiation and participation for the newcomer and for an emerging community. Lave and Wenger (1991) describe this dilemma:

On the one hand, they need to engage in the existing practice, which has developed over time: to understand it, to participate in it, and to become full members of the community in which it exists. On the other hand, they have a stake in its development as they begin to establish their own identity for the future. (p. 115)

The intersection in time and place of two communities who are of the same network of practice allows for the development and cultivation of both communities. The design for this event can remain organic even while it is systematic and planned. The presence of their more adept predecessors offers the new cadre members legitimate and valued learning because they have access to mature models of their own yet-to-be-developed practice (Lave & Wenger, 1991).

As is characteristic of true communities of practice, the newcomers will at the same time, literally, participate in design that facilitates their learning as they evolve their practice. Likewise, an intergenerational linkage of these communities in this manner allows the more mature community to replicate at least a part of its identity and toolset, passing on as it were best practices within their common domain before returning to their own singular sets of activity. Hanks (1991) posits that the design challenge is “to regiment the interactions in which learning is likely to occur, as well as the outcomes to which they may lead” while remaining authentic to the real worlds of the intersecting communities (p. 19).

Finally, acknowledging the limitations of time and space and remembering that the objective is to establish a community that will live online, two issues must be considered: transference of the community to that online environment and remediation for those skills not yet mastered. Hanks (1991) raises the design considerations here as “how one describes the detachability of these skills from the participatory contexts in which they were acquired” (p. 19). From this perspective, the authors in this case have examined the Cadre 7 pre, during, and post Tech Camp experience.

Method

Ed.D. in Educational Technology

For the purpose of familiarizing the reader with the Ed.D. degree program in educational technology at Pepperdine University, the following is the current description posted on the Web site of the Graduate School of Education and Psychology (Pepperdine University, 2003):

The doctoral concentration in Educational Technology has been designed to prepare leaders in the field of technological applications and innovation in the world of education and business. All courses for this program are taken with a cadre, or team, with an annual intake in Fall. Course work is integrated with 60% face-to-face meetings and 40% online segments, creating a truly distributed learning environment. The majority of communication occurs online through newsgroups, Web pages, and real time “chat” in a virtual environment hosted by SRI and Pepperdine.

Concentration courses focus on advanced learning theory as it is related to product design, the relationship between humans and computers, and the special management issues that surround technology. In addition, core courses are geared toward the technological environment where appropriate. All students complete a five-unit consultancy, and as part of the Policy Development course, spend several days in Washington, D.C., discussing technology and education policy with national leaders. . . .

Online classes are conducted on the Internet, and face-to-face classes are offered at Pepperdine University Plaza in West Los Angeles, the east coast, and London. To facilitate online communication and assignment completion, all students are required to purchase a laptop computer.

The program begins with a mandatory, one-week Technology Camp. . . . Attendance for face-to-face sessions is required for five extended weeks (most occurring over a weekend) each year. (¶ 1-2, 4-5)

Tech Camp

Subsequent to the doctoral program narrative, visitors to the GSEP Web site are invited to visit the Online Learning Community where, among other general information, they are made aware of technical requirements, and where they examine sample schedules and discover Tech Camp:

Tech Camp is the initial, mandatory face to face meeting of all doctoral students in a new cadre. It usually takes place in early July at the Pepperdine Culver City Campus. At Tech Camp students get to know each other, meet the faculty members, and begin to master the applications and techniques they will need to be successful in the program.

The desired outcomes for each student include:

- Establishing a strong Community of Learning within the cadre
- Mastering critical technology tools and online skills
- Connecting with faculty and past Pepperdine cadres
- Mastering the online library and technical support tools
- Learning collaboration and time management techniques
- Reviewing program expectations and set schedule

This intensive experience sets the tone for the rest of the doctoral program. And it is required of all students regardless of their technical expertise. Tech Camp is about learning to learn together. Team building activities promote the development of personal and professional relationships that serve as an anchor for the electronic collaboration necessary in the online program. Students gain confidence as they grow in participation with a larger community of educational technologists (Pepperdine University Cadre 8, 2002, ¶ 1-3).

Cadre 7 Tech Camp

The Cadre 7 Tech Camp was directed by Dr. Paul Sparks and was conducted by various members of Cadre 6. In addition, program and resource presentations were made by the Pepperdine GSEP faculty and staff. Tech Camp was held at the Culver City campus, Los Angeles, California.

In the Cadre 7 Tech Camp information document that was posted on the Tech Camp Web site prior to the event, the following description of the program was given:

What the heck is Tech Camp?

All entering students in the doctoral program in the Educational Technology must complete the upcoming Tech Camp pre-session scheduled for July 11-15, 2001 at our Culver City, California campus.

Tech Camp is dedicated to team-building, introducing course work, and technical fluency.

Following this brief description, the information document contains several pages conveying a variety of logistical information and requests for data verification.

Participants

The participants in Tech Camp were the 23 Cadre 7 members who had accepted admission to the program. They were from various locations across the United States, the majority from California with two students from Texas, and one student each from Alaska, Kansas, Florida, Maryland, and New Jersey. The participants were from various educational environments, including K-12, higher education, and corporate education, holding a variety of positions within those environments. The cadre consisted of teachers, administrators, librarians, technical specialists, program managers, and executives. Their educational backgrounds were also varied with degrees earned in a number of subject areas. Their technical fluency and competence was wide-ranging. Per Pepperdine’s admissions requirements, all applicants were expected to have had at least five years of work experience in a technology-rich environment.

Additional Tech Camp participants included professors and administrators from the Pepperdine Graduate School of Education and Psychology (GSEP), as well as previous cadre members, particularly those of Cadre 6.

Tech Camp Agenda and Time Allocations

Tech Camp was structured around an agenda that addressed the three purposes to which the event was dedicated. Excluding time for evening meals and a social event on Friday evening, Tech Camp ran for 47 hours from Tuesday evening through Saturday evening.

The time was allocated according to the schedule in Table 1.

Table 1

Tech Camp Time Allocation

	Total Hours	Percent of Total
Technical Fluency	19.5	41%
Coursework	10	21%
Community Building	17.5	37%
Total	47	100%

Data Collection and Analysis

Survey

A survey was conducted at the conclusion of Tech Camp. The participants were asked to rate 11 components of the Tech Camp program for the qualities of “execution” and “relevance” on a scale ranging from 1 (lowest) to 5 (highest). Only 7 of the 23 participants completed and submitted the survey. Table 2 consists of the components and their summary rating.

Table 2***Components of the Tech Camp Program, Rated for “Execution” and “Relevance.”***

Component	Relevance	Execution
PreCamp Information	3.43	3.29
Laptop Set Up	3.71	3.14
Technology Infrastructure	4.00	2.71
Core Application Sessions	3.86	2.71
Community Building Activities	3.86	3.43
Cadre Group Project	4.00	3.29
Lunch Assignments	3.71	3.57
Free Social Time	4.29	3.71
Cadre 6 Panel	3.71	3.14
Food and Facilities	3.86	3.43
Faculty Sessions	4.57	4.43
Optional Sessions	3.14	2.14

Note. Rated from 1 (lowest) to 5 (highest).

Although this set of seven respondents cannot be said to provide a representative sample of the Cadre 7 population, the data provided by their survey, as well as the comments they included, are instructive for purposes of this case. A significant variance in this data is in the ratings for the execution of the Tech Infrastructure (the hardware, software, network access, technical support, and user ids at the Tech Camp location), the Core Applications Sessions (the sessions designed to impart technical fluency on the distance learning applications, e.g. Tapped-In, newsgroups, web design), and Optional Sessions (essentially free time to work on group projects and/or work with the technology). At 2.71 on the scale, the Tech Infrastructure and Core Applications Sessions, are significantly below the execution ratings of the other components, even as their relevance scores, 4.0 and 3.86 respectively, are as high as most other components. These two components comprised 41% of the Tech Camp program time and are directly related to the participants’ ability to learning the tools that will enable them to function in the ongoing and online experience of the Cadre 7 community of learners.

Newsgroups

The authors initiated two separate newsgroup discussions for Cadre 7 members. The following summarizes the content of both discussion groups:

The first discussion group was initiated on October 12, 2001 just after Cadre 7 had completed its first face-to-face meeting after Tech Camp. The last entry was on November 27, 2001. Nine Cadre 7 members, including the authors, posted a total of 21 messages. The focus of this newsgroup was on the issue of face-to-face events as a preparation for a distance learning program. The discussion commenced with the question, "How important is a face-to-face meeting prior to beginning a distance learning program?"

The content of this newsgroup was speculative and offered a variety of opinions on the question. There was some anecdotal evidence that face-to-face meetings provided online learners with a greater depth of interpersonal association and recognition that reinforced the development and clarity of identities in the online environment. One thread addressed the many difficulties of distance learning and pointed to a 50% drop out rate in higher education distance learning. In addition, there was some thought that a student with low self-esteem might be most challenged in this environment because "it is hard for someone to hide online" (Pepperdine newsgroup).

The second newsgroup was initiated on November 19, 2001, and was completed on November 28, 2001. The focus of this newsgroup discussion was on two questions that were asked in the first posting:

1. Did Tech Camp succeed in creating a sense of community within the cadre? Why or why not?
2. Did Tech Camp prepare you to use the tools needed for the program? Why or why not?

In answer to the first questions, all participants agreed that Tech Camp was successful to varying degrees in creating a sense of community. Most of the responses included some reference to the activity of "getting to know each other" as some propellant toward establishing community. Yet even those participants echoed the view of others who thought "it began our sense of community" and "sort of planted the 'seeds,' so to speak" and who were clear that this was at best an incipient effort. While a few referred to "fatigue," "frustration and anxiety," and the need for "more time working together," one participant was clear that his experience of the "disorganization in the process" made him more detached, although he admitted that this adversity may have brought the group together.

In answer to the second question, the participants were not certain that Tech Camp had prepared them to use the tools needed for the program. Only one participant felt that he was "adequately prepared." The rest of the eight answered negatively to varying degrees. A few key issues emerged from their responses: "not enough time to get to know all of the tools needed," "technical glitches," "stuff could have been set up in advance," "practice could have been simulated or situated within the actual activities we would need to use for the program," "the assessment process was inadequate," and confusion about "suggested software" versus "required software." These perspectives have been generally supported over time by cadre members in subsequent informal face-to-face and online conversations.

Recommendations

Designing for Learning

Reflecting the research in this field as referenced by this case and considering improvements based on feedback from participants, the authors recommend that a formal design process be carried out to address three critical areas:

- Defining the knowledgeable skills of the network of practice that is the Pepperdine University doctoral program in educational technology. It seems that some effort should be made to define and articulate those ways of dealing with the problems typical of the learning and leadership domain that have been developed and are being developed over time within the network. This should include a thoughtful analysis of the technologies being learned and deployed in support of practice in the face-to-face events, the online interaction, and of the general systems and processes of knowledge management for the network and the communities.
- Facilitating, rather than frustrating learning. Enough data was gathered both formally and anecdotally to indicate that the objective of promoting a student-directed learning experience was subverted by various levels of confusion and misinformation experienced by Cadre 7 participants in the weeks leading up to Tech Camp. It seems also likely that inadequate levels of design, administrative, technical, and instructional resources were brought to bear in planning for and executing the environment and this also served to frustrate learning.
- Designing authentic activities. Consistent, though limited feedback, indicates that the majority of the learning exercises on the technologies were not contextualized, nor were the various levels of competency within the cadre adequately considered in the design of those exercises. In addition, the time allocated to the various technologies was not consistent with their relevance to the practice or to their level of complexity. These issues could be addressed by considering the definitions of knowledgeable skills in the design, further integrating the faculty presentation with the technologies, improving the pre-class surveys, and subsuming the learning in the demonstrated and shared practice of the previous cadre members.

Entering the Community

It would accelerate and stabilize the process of establishing the community if there were greater opportunity to express identity and discover community in pre-Tech Camp practice. This could be accomplished through interactions enabled by the Tech Camp Web site and by using technologies such as chat sessions as an entry point to active participation. Another effective tool might be using information management as a way to ground the community. This could be accomplished by posting and sharing information provided by cadre members about their motivations, concerns, and interests.

Nurturing for the Next Step

To address the issue of transference of the community to the online environment, the authors recommend that the community project at Tech Camp be comprised of the following three objectives:

1. Developing an information architecture,
2. Owning the Cadre 8 Community Portal, and
3. Establishing ground rules and guidelines for community norms.

To address the continuing mastery of the technical skills required during the gap between Tech Camp and the first face-to-face event of the next semester, the authors recommend that cadre members participate in synchronous and asynchronous interactions that will advance the practice of the Tech Camp community project.

Conclusion

Being alive as human beings means that we are constantly engaged in the pursuit of enterprises of all kinds, from ensuring our physical survival to seeking the mostly lofty pleasures. As we define these enterprises and engage in their pursuit together, we interact with each other and with the world and we tune our relations with each other and with the world accordingly.

Over time, this collective learning results in practices that reflect both the pursuit of our enterprises and the attendant social relations. These practices are thus the property of a kind of community created over time by the sustained pursuit of a shared enterprise. It makes sense, therefore, to call these kinds of communities, communities of practice (Wenger, 1998a).

This study has provided insights into the nature of the Tech Camp program, dedicated to team-building, introducing course work, and technical fluency. Was Tech Camp successful in meeting the following stated objectives:

- Establishing a strong community of learning within the cadre?
- Mastering critical technology tools and online skills?
- Connecting with faculty and past Pepperdine cadres?
- Mastering the online library and technical support tools?
- Learning collaboration and time management techniques?
- Reviewing program expectations and set schedule building a community of practice?

According to Wenger's (as cited in De Cagna, 2001) definition of the three essential elements of a community of practice, to what extent did Cadre 7 develop an understanding of and facility with their practice as a result of the Tech Camp experience? In what ways did this understanding or facility demonstrate itself?

What is the Cadre's Practice? What Should it Be?

If Cadre 7 became masters in this practice, in conjunction with other cadres who have established or will establish communities themselves, they will be able to extend their mastery outwards to initiate similar communities in different contexts. In other words they will be able to apply and share their mastery in the professional education communities in which they

participate. In the process, their community will change, the tools they use may change, and they as individuals will be transformed.

Follow-Up

The research in this case continues. Further study of the data gathered from the Cadre 7 group and from other Tech Camp stakeholders and participants is ongoing. In addition, the authors implemented the recommendations offered in this study in the summer 2002 Tech Camp program. At that time, data and observations were collected and analyzed in accordance with this investigation. Data was again collected with the 2003 program, with intent to provide further explication. The author is presently analyzing the findings and compiling the results, along with current research in this area.

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