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Teacher Participation in Online Communities: Why Do Teachers Want to Participate in Self-generated Online Communities of K–12 Teachers?

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Abstract

The purpose of this study was to examine reasons for teacher participation in online communities of K–12 teachers. The authors interviewed 23 teachers from three self-generated online communities and analyzed more than 2,000 postings in those communities. The findings indicated five reasons for participation: (a) sharing emotions, (b) utilizing the advantages of online environments, (c) combating teacher isolation, (d) exploring ideas, and (e) experiencing a sense of camaraderie. In conclusion, the findings imply that when designing teacher professional development programs, more emphasis needs to be placed on teachers' emotional sharing and promotion of self-esteem. (Keywords: online communities, teacher professional development, community of practice, teacher emotional sharing.)

INTRODUCTION

Utilization of the Internet has greatly increased since it was first developed in the 1960s (Abbate, 1999). According to Internet World Stats (2007), 71% of Americans use the Internet. As a result of this widespread access to the Internet, educators have explored a variety of methods to utilize the Internet for teaching and learning (Palloff & Pratt, 2005). One such effort is the development of online communities of teachers (Schlager & Fusco, 2003).

Jones and Preece (2006) define *online community* as "a group of people who come together for a particular purpose or to satisfy particular needs; they are guided by formal and/or informal policies and supported by computing technology" (p. 113). Interest in creating online communities of teachers has increased dramatically because of their potential to promote ongoing teacher interaction. Research continually indicates that providing continuous support and promoting interaction among teachers are keys to successful teacher professional development (Hiebert, Gallimore, & Stigler, 2002; Lieberman, 2000; Fiszer, 2004). Online environments enable people to communicate at any time; thus, Barab, Kling, and Gray (2004) have suggested the creation of online communities of teachers as a new professional development model.

Many educators have attempted to create online communities for teachers. For example, the Inquiry Learning Forum (ILF) is an online community of teachers designed to assist math and science teachers in their use of inquiry-based approaches by helping them share ideas and opinions about teachers' actual practice (Barab, MaKinster, Moore, & Cunningham, 2001). The National Quality Schooling Framework (NQSF), which was developed to support teacher learning and the implementation of school improvement projects, invited more than 100 teachers in Australia to share ideas and resources through the NQSF website (Carr & Chambers, 2006).

However, there is a lack of research concerning self-organized online communities of teachers. Teachers themselves have created a number of online communities, but these communities have not been extensively investigated (Hur & Hara, 2007). Furthermore, many teachers have participated in self-generated online communities for long periods of time, whereas fewer teachers actively participate in the communities that are developed for research purposes (Zhao & Rop, 2002). This finding prompts the question of what motivates teachers to participate in self-generated online communities of teachers. These communities may provide unique elements that help teachers' professional work, leading teachers to participate voluntarily over a long period of time. Identifying these practical elements is critical because they can provide new insight into creating teacher professional development programs that better meet teachers' needs. Consequently, the purpose of this study was to understand reasons for K–12 teachers' participation in self-generated online communities of teachers.

THEORETICAL FRAMEWORKS

The online communities of teachers that this study investigates are communities of practice in online environments. This section defines the notion of communities of practice and explains social learning theory and emotional sharing. Understanding knowledge and emotional sharing in communities of practice is important because these encourage members to participate. This section also discusses previous research findings that identify reasons for participation in online communities.

Communities of Practice

Communities of practice are groups of practitioners who share knowledge, concerns, and values within a supportive culture (Lave & Wenger, 1991). Wenger (1998) proposes that such communities entail mutual engagement of members around a joint enterprise. Members share repertoires of tools, stories, routines, and words that the community has generated or developed; the repertoire becomes a part of the community's practice. Communities of practice are different from groups or gatherings in that they seek to develop members' capacities and knowledge and sustain the community as long as the interests of members last (Moore, 2003). The notion of communities of practice has been loosely used in diverse situations, including groups of students in classrooms. However, it has been most widely utilized to denote a group of people

who share ideas and resources related to jobs in work settings (Jones & Preece, 2006). With new technologies, Jones and Preece suggest that communities of practice can be formed in virtual (online) environments.

One of the main reasons why educational researchers and practitioners are paying increasing attention to the concept of communities of practice is that scholars attest that learning occurs while individuals are actively engaged in these communities. This new perspective on learning is called *social learning theory* (Putnam & Borko, 2000; Wenger, 1998).

Social Learning Theory

Putnam and Borko (2000) explain that in social learning theory, cognition is viewed in three distinctive ways: cognition as situated, cognition as social, and cognition as distributed. Understanding each of these aspects contributes to a more holistic understanding of social learning theory.

From a *cognition as situated* perspective, knowledge and learning are situated in contexts where learning takes place. Knowing and learning are typically understood as gaining abstract knowledge inside the mind. However, situated theorists challenge this notion and argue that the social and physical contexts in which the knowledge is presented are an integral part of learning. Meaningful learning can occur only when learning is embedded in the social context where the knowledge is used (Brown, Collins & Duguid, 1989).

The *cognition as social* perspective emphasizes social aspects of learning. What people consider to be knowledge and how people think and develop ideas are the products of interaction and negotiation within communities of practice over time (Putnam & Borko, 2000; Wenger, 1998). The role of people in the learning process is more than simply providing encouragement for individual knowledge construction (Resnick, 1991); knowledge is the outcome of ongoing interactions with groups of people.

From the perspective of *cognition as distributed*, cognitive properties are not solely individual; rather, they are distributed across individuals (Lave, 1993; Salmon, 1993). According to Hutchins (1991), all division of labor requires some distributed cognition to coordinate the participants' activities. For example, various kinds of cognition are needed to produce an automobile, including the cognition related to effective engine development, safety regulations, and car body design. Distributed cognition across people who develop the automobile and tools makes it possible to produce a safe and effective automobile (Putnam & Borko, 2000).

Social learning theory indicates that teachers gain new knowledge while participating in communities of practice. Such opportunities for knowledge development may encourage teachers to get involved in community activities. Another possible reason for participation is to share emotions such as concern, joy, and frustration.

Emotional Sharing

There is ongoing debate regarding the definition of emotion. Some authors use terms such as feelings, emotion, and affect almost interchangeably (Ashkanasy, 2003). According to Sutton and Wheatley (2003), emotion includes

several different components, including appraisal, subjective experiences, physiological changes, and action tendencies. The emotional process starts with appraisal of goal congruence or incongruence. Positive emotion arises when one feels that her personal goal is achieved, whereas negative emotion occurs when a goal is not met. The subjective experience of emotion is a type of private mental state, such as happiness, anger, or sadness. The process also entails physiological changes, such as a shift in body temperature, after which the body responds with a certain action, such as shouting for joy or crying.

Scholars argue that emotion, cognition, and action are integrally connected (Hargreaves, 2001). For example, emotion can help people choose from multiple actions, and cognitive reflection can assist in moderating emotion. Hargreaves (2001) argues, "Emotion and cognition, feeling and thinking, combine together in all social practices in complex ways" (p. 1056). Zembylas (2003) claims that emotion and reason are interdependent; what is right depends on emotional preference, and emotion requires logical interpretation. Scholars agree that emotion involves an interaction of cognitive and noncognitive systems (Ashkanasy, 2003). Emotion can be initiated by cognition synchronously or as an antecedent to it. People often share emotion with others, especially during extremely negative or positive emotional events. The majority of people share emotion with intimate companions, such as parents, a spouse, or close friends (Christophe & Rimé, 1997).

The descriptions above indicate that emotion is comprised of multiple components. A given experience can evoke positive or negative emotion, encouraging one to reflect on the experience. People's reactions depend on personal goals or mental status, and certain actions can further affect emotions. Therefore, understanding the relationships of various components is essential to grasp the complexity of emotional sharing.

The discussions so far imply that teachers may participate in online communities to share knowledge or emotion. The following section discusses previous research about how teachers decide whether or not to participate in online communities.

Participation in Online Communities

According to Ling et al. (2005), 4–10% of members in online communities produce more than 50–80% of the messages and resources shared, whereas others remain inactive. Baek (2002) explains six reasons teachers do not participate in online communities: (a) lack of time, (b) isolated work, (c) lack of reflection on their practice, (d) lack of technical support, (e) pressure from state-mandated standards, and (f) pre-existing mistrust directed at the university and preferences for face-to-face interaction.

Hew and Hara (2007) examined reasons for sharing knowledge in online communities of teachers and summarized four main motivators: (a) collectivism: teachers share knowledge to improve the welfare of community members, (b) reciprocity: teachers want to share knowledge because they have received help from others and want to give back, (c) personal gain: sharing knowledge helps teachers gain new knowledge, and (d) altruism: teachers feel empathy for other teachers' struggles and would like to support them by sharing suggestions.

Ellis, Oldridge, and Vasconcelos (2004) claim that people participate in online communities not because of the information shared but because of the sense of belonging that participation produces. Daugherty et al. (2005) state that members join online communities for various reasons, such as information seeking and emotional sharing, but they also point out that some members do not have an explicit need for communication with other members.

In summary, reasons for teacher participation in online communities vary depending on components such as individual goals, personal experiences and characteristics, relationships with others, and school culture. These different elements need to be taken into account when examining reasons for participation in online communities of teachers.

Purpose of Study

The previous literature indicates that online communities of teachers are places where teachers share both knowledge and emotion. There have been studies concerning research-driven online communities of teachers (e.g., Barab, MaKinster, Moore, & Cunningham, 2001; Schlager & Fusco, 2003), but self-generated online communities of teachers have been less thoroughly investigated (Hur & Hara, 2007). The growing popularity of teachers' participation in self-generated online communities (e.g., proteacher.net) justifies the necessity of examining these communities. Educators should understand what brings teachers to these communities in order to investigate teachers' specific needs. Consequently, this study examined three self-generated online communities to explore areas that teacher professional development needs to emphasize. The following research question guided this study: Why do teachers want to participate in self-generated online communities of teachers?

METHOD

Research Design

To achieve the goals of this research, we conducted a case study (Merriam, 1998). Yin (2003) attests that a case study is particularly appropriate in situations where (a) research questions mainly focus on "how" and "why," (b) behaviors in cases cannot be manipulated, and (c) the research concentrates on contemporary events. This study is intended to explore why teachers participate in online communities of teachers. Participation in an online community is a contemporary phenomenon in which the behavior of participants cannot be controlled.

Case Selection

Eight criteria were developed to select cases based on previous literature and the research question. The first criterion was "the majority of community members should be K–12 teachers," as defined by the research question. The second criterion was "the community should have more than 1,000 members." The size of communities tends to play an important role in the amount of interaction among existing members and in attracting new members, so the study was restricted to communities with at least 1,000 members (an arbitrary number).

Larger communities are more likely to have active and ongoing participation and a continually growing membership (Schoberth, Preece, & Heinzl, 2003).

The next criterion was "the community needs to meet the characteristics of communities of practice." Jones and Preece (2006) divide online communities into two groups, communities of interest and communities of practice. Communities of interest are informal groups that are open to anyone who shares similar interests. By contrast, communities of practice are groups of practitioners who share knowledge, beliefs, and values (Lave & Wenger, 1991; Wenger, 1998). This study aimed to understand how a group of teachers share knowledge and emotions within communities of practice, so communities of interest were excluded. The fourth criterion was "the community should have been active more than one year." Our goal was to examine reasons for ongoing participation over a long period of time, so we limited cases to communities with a minimum of one year of existence.

The fifth and sixth criteria were "participation should be voluntary" and "the community should be organized by members in the community." The purpose of this study was to understand teachers' participation in self-generated online communities of teachers, so we included only communities that were developed and organized by members who chose to participate. The next criterion was "the community should be Web-based, not an electronic mailing list." We included only Web-based communities in which members needed to visit the site to participate and excluded communities that were based on electronic mailing lists. Our research question was to examine reasons for voluntary participation during which people choose independently to visit a site rather than being prompted, invited, or reminded to do so.

The last criterion was "the researchers should be able to research the community." This criterion is important because, unless researchers have permission to research, examining cases is difficult (Stake, 1995).

Based on these eight criteria, we conducted an Internet search examining communities. Three communities met the first seven criteria. We e-mailed the community organizers to ask for permission to research. Two developers allowed us to research their communities, but one would not grant permission for us to interview the community members. Thus, only two communities were examined in the beginning of this study.

While we interviewed members of the first two communities, three members introduced us to another community where they actively participated. We visited the community and weighed it against the eight criteria. We found that the suggested community not only met the criteria but also provided compelling reasons for teacher participation. Thus, we included the last community, bringing the total for the study to three communities.

The three online communities of teachers are the Teacher Focus community, the WeTheTeachers community, and the Teaching community in LiveJournal (T-LJ).

Teacher Focus. Teacher Focus was developed in 2001 by a former high school teacher, and more than 5,300 teachers were registered as of May 2007. The membership information available on the site indicated that on average, one to

four new people registered for the community each day. The main focus of the community was online discussion. Members shared concerns, ideas, and experiences using 11 discussion boards. Over 35,500 postings had been made from its inception to May 2007, and 323 new messages were posted from January to April 2007. Members have the option to share personal pictures or homepages, but we observed that most people participated anonymously.

The participation level and characteristics of participants varied. Six members had posted more than 1,000 messages, and 43 members posted 100–1,000 messages. The other people fall into a category known as *lurkers*, people who only read postings and rarely participate in discussions. Lurkers are defined as those who posted fewer than five messages in this community. The membership information indicated that teachers who had made more than 500 postings generally had extensive teaching experience, ranging from 10 to 35 years. However, many potential teachers, including those who had changed or planned to change careers, and new teachers who had fewer than 5 years of teaching experience, also participated in the community. The community had many teachers from other countries, including Canada, South Africa, Norway, and New Zealand. The two teachers from Norway and New Zealand made more than 500 postings, demonstrating that the boards had an active international presence.

WeTheTeachers. WeTheTeachers was developed by a former elementary school teacher in 2005, and it had more than 2,500 members as of May 2007. The member profile indicated that approximately one new person registered in the community per day. WeTheTeachers had two distinct purposes: sharing lesson plans and online discussion. The site provided a place where teachers uploaded their own lesson plans or teaching materials. As of May 2007, members had uploaded 984 lesson-related files and shared 1,195 postings on 19 online discussion boards. Sharing personal information, such as pictures or e-mail addresses, was optional. We observed that approximately 10% of participants identified themselves, but most members used pseudonyms.

The way members participated was diverse. Some teachers actively shared lesson plans but rarely participated in online discussion, whereas some teachers participated only in online discussion. Most members were K–12 teachers who taught various subjects including foreign languages and arts classes. Members had a wide range of teaching experiences, from college students majoring in education to teachers who had taught for 40 years. There were also teachers from other countries, including Canada, the United Kingdom, and India; however, they were mostly lurkers.

Teaching community in LiveJournal (T-LJ). LiveJournal (www.livejournal.com) is an online social networking and journaling site that was created in 1999. Many online communities are related to education on LiveJournal (LJ), including "teaching (T-LJ)," "1st_ year_ teachers," "elem_ed," and "lesson_ plans," but T-LJ is most popular in terms of the number of members and frequency of updates. T-LJ was created in 2001 by a member of LiveJournal (LJ) who taught physics at a university, and it had more than 1,500 members as of May 2007. T-LJ was based on blog technology, so discussion was not divided into several different topics as was Teacher Focus or WeTheTeachers;

Table 1. General Information about the Online Communities of Teachers

	Teacher Focus	WeTheTeachers	T-LJ
Membership Size	5,300	2,500	1,500
Date of Inception	2001	2005	2001
Main Purpose	Discussion	Lesson plan sharing and discussion	Discussion
Message Characteristics	Teaching ideas and emotional sharing	Lesson plan ideas	Questions regarding lessons or resources and emotional sharing
Technology	Structured forums	Structured forums	Blog
Active Participants	Experienced teachers	New and experienced teachers	New teachers

rather, T-LJ had one broad discussion topic, teaching. Teachers could discuss any topics related to teaching, and new entries were organized by date. Active discussion occurred daily in the community. As of May 2007, on average, 4.4 new entries were posted every day, and each entry received approximately eight comments. The total number of new entries from January to April 2007 was 531. Like the other two communities, members have the choice of sharing their own pictures or personal journals. Most people used icons instead of their own pictures and participated with pseudonyms.

Many participants in T-LJ were student teachers or new teachers with less than 5 years of teaching experience. As in the two communities above, most members were K–12 teachers who taught various subjects. In terms of nationality, most teachers were American, yet several entries were made by Canadians and Australians. The general information about the three communities is summarized in Table 1.

Table 1 indicates that the three communities not only share the commonalities that the eight criteria defined, but also have several distinctive components, such as main purpose or characteristics of active participants. The differences in the three communities can provide a broad view of online communities, so the findings from the three online communities suggest compelling reasons why teachers want to participate in certain online communities of teachers. In other words, the three cases provide the best opportunity to answer the research question, which is an important criterion in the selection of cases (Stake, 1995).

Participants

For each community, we spent approximately one month examining the characteristics of participants, including level of participation, years of teaching experience, and school level (e.g., elementary or secondary). In order to represent the voices of the members in each community fairly, we attempted to invite a balanced number of participants from each community. We invited a total of 120 members, 23 of whom agreed to participate: 9 from Teacher Focus,

Table 2. Demographic Information of Participants

Pseudonym	Teaching experience (years)	School level	Gender	Case	Participation*
Bob	10	High	M	TF	1820 (A)
Susan	10	4–8	F	TF	1810 (A)
Dick	17	Elementary	M	TF	1480 (A)
Kathy	24	6–8	F	TF	650 (A)
Ryan	More than 20	Elementary	M	TF	18 (I)
Anna	35	Middle	F	TF	1200 (A)
Tyler	More than 10	7	M	TF	530 (A)
Sydney	3	5–12	F	TF	120 (A)
Maria	More than 20	Elementary	F	TF	4 (L)
Nancy	10	Middle	F	WT	32/82 (A)
Sophia	More than 20	High	F	WT	63/36 (A)
Sarah	3	High	F	WT	0/51 (I)
Savannah	3	Elementary	F	WT	1/19 (I)
Mary	1	Elementary	M	WT	0/0 (L)
Austin	8	High	M	WT	8/23 (I)
Alexis	1	Elementary	F	WT	6/2 (I)
Amy	2	6	F	WT	190/35 (A)
Amanda	More than 20	Elementary	F	T-LJ	A**
Jessica	1	Elementary	F	T-LJ	I
Hannah	3	High	F	T-LJ	I
Mia	8	Elementary	F	T-LJ	A
Judy	1	Elementary	F	T-LJ	A
Ava	1	High	F	T-LJ	A

**Number refers to number of postings (TF) or postings/file shared (WT); A=active member (> 30 postings), I = infrequent member (5–30 postings), L=lurker (< 5 postings)*

*** Exact number of postings by each participant is not available in T-LJ.*

8 from WeTheTeachers, and 6 from T-LJ. Characteristics of each participant are summarized in Table 2.

In terms of levels of participation, we divided participants into three groups: active members (> 30 postings), infrequent members (5–30 postings), and lurkers (< 5 postings). Teacher Focus and WeTheTeachers both provided a tool to check the number and content of postings made by each member. Based on this information, we selected 30 active members (20 from Teacher Focus and 10 from WeTheTeachers), 40 infrequent members (25 from Teacher Focus and 15 from WeTheTeachers), and 30 lurkers (15 from Teacher Focus and 15 from WeTheTeachers) and sought their participation via e-mail requests. We chose active members based on the number of postings they made and invited the 30 teachers who were most active in Teacher Focus and WeTheTeachers. We

selected infrequent members based on the number of postings and participation dates. Among the members who made 5–30 postings, we selected 40 members with recent posts, assuming a higher likelihood of response compared to members who had posted within six months. We randomly selected 30 lurkers from the membership lists.

T-LJ did not provide a comparable tool, so we manually counted the number of postings from January to April 2007 to identify the participation level. We selected 10 active members based on who made the greatest number of posts, 10 infrequent members based on who recently made a smaller number of new posts, and 10 lurkers who made at least one post recently. In total, we invited 40 active members, 50 infrequent members, and 30 lurkers from the three communities; 13 active members, 8 infrequent members, and 2 lurkers participated.

In terms of years of teaching experience, ten teachers had 1–5 years of teaching experience, and five teachers had 6–10 years of experience. Two teachers had 11–20 years of experience, and six teachers had more than 20 years of experience. In terms of school level, ten teachers from elementary schools, seven teachers from junior high schools, and six teachers from high schools participated. Six were male and seventeen were female.

Data Sources

We gathered multiple data from four sources:

Interviews. We developed semistructured interview protocol, including four topic domains, based on previous literature and the research question. The topic domains were (a) beliefs about teaching, (b) motivation for posting, (c) ways to participate in the communities, and (d) relationships with other teachers in their local schools. Based on the protocol, phone interviews and e-mail interviews were conducted.

Meho (2006) attests that e-mail interviewing has unprecedented potential to overcome some challenges of conducting qualitative research, including cost and access to participants. He argues that e-mail interviewing can be a viable alternative to face-to-face and telephone interviews, especially when there are barriers to an investigation such as time and geographic location. He suggests several guidelines for conducting effective e-mail interviews, including inviting participants individually rather than via a mailing list or message board, and providing a clear and appropriate number of interview questions. We carefully collected interview data following those suggestions.

Archived postings. We collected and reviewed postings from the three communities. We examined popular postings in terms of the number of views and replies were selected and major themes of those postings. We also selected postings by each interview participant and investigated the purpose of their initial participation. In total, we analyzed 810 from Teacher Focus, 530 from WeTheTeachers, and 750 messages from T-LJ.

Community guidelines. E*ach community provides specific guidelines that participants must follow, including rules and policies, copyright notice, and procedures for posting and editing messages. We reviewed the guidelines to better understand the rules and culture of each community.

Members' public profiles. Each member has a personal profile in the communities. Some teachers share their e-mail addresses, homepage addresses, personal pictures, geographic locations, or blogs. As a result, we reviewed members' profiles, visited homepages, and read blogs to explore characteristics of participants in the communities.

Procedures

We first examined characteristics of members in each community and then undertook interviews and reviews of archived postings concurrently. To investigate potential participants, we examined each member's level of participation and selected 20 active members from Teacher Focus and WeTheTeachers. After responding to an invitation e-mail, eight members agreed to participate. Two of them preferred phone interviews, whereas six teachers wanted to participate via e-mail. We first conducted phone interviews lasting approximately 40 minutes, followed by interview questions to the six participants via e-mail. We sent follow-up questions to those six participants two to six times depending on their willingness to answer additional questions and the level of clarity of their initial answers.

To explore more diverse participants' opinions, we selected new potential participants, including 20 active members, 50 infrequent members, and 30 lurkers from the three communities. We sent an invitation e-mail to 10 of them, and two teachers (one active member and one infrequent member) agreed to participate. We conducted e-mail interviews with those teachers two to three times. The same process (i.e., sending e-mail to 10 potential participants and conducting e-mail interviews) continued until data saturation was achieved (Merriam, 1998).

While interviewing, we visited the communities on a daily basis and read both archived and new postings. We first examined the number of views and selected those threads that were viewed more than 1,000 times to explore popular topics in the communities. As of May 2007, the average number of views for each posting was around 700 in Teacher Focus and WeTheTeachers, so we set 1,000 as our study minimum, assuming that postings viewed more than 1,000 times were popular among community members. The number of views was not available in T-LJ. Thus, we reviewed entries based on the average number of comments; the average number of comments for each entry was approximately 8, so our study focused on those with at least 20 comments.

To understand current topics discussed in the community, we reviewed every thread posted from January 1 to April 30, 2007 (approximately 910 messages). After we summarized the main ideas of each post, we organized the postings made by the interview participants in this study. We reviewed participants' initial postings to examine the stated purpose of their new participation (e.g., how they got involved in the community and how they introduced themselves). After that, we randomly selected 5–30 postings for each participant and examined the role and frequency of participation. We usually spent 30–90 minutes each day reading postings and analyzing communication patterns.

Data Analysis

We coded and categorized the collected data during analysis (Lincoln & Guba, 1985). We first created low-level codes that require little abstraction and are objective (Carspecken, 1996). We created both main codes and subcodes as necessary. When we encountered sentences that had implicit meanings, we conducted reconstructive analysis, including meaning field analysis and validity reconstruction (Carspecken, 1996).

Meaning field analysis is a technique that makes tacit meaning explicit by articulating possible meanings that participants in the site overtly or covertly express or infer (Carspecken, 1996). We conducted meaning field analysis to (a) help examine possible biases and missing points, (b) recognize cultural forms that needed to be understood through further analysis, and (c) lay the groundwork for validity reconstruction.

Carspecken (1996) explains, "Putting previously unarticulated factors into linguistic representation is reconstructive" (p. 42). Validity reconstruction includes a horizontal analysis and a vertical analysis. Horizontal analysis places validity claims within three categories: objective, subjective, and normative-evaluative. Vertical analysis is used to distinguish the level of reference—immediate reference (foregrounding) or remote reference (backgrounding). The reasons we utilized validity reconstruction method were that it helps researchers more closely understand participants' intended meanings and explicitly articulate backgrounded meanings by putting possible meanings in three different worlds. We continually compared the results from validity reconstruction with other data, such as the member profile and postings in the community, to present participants' intentions.

The codes that emerged from the data were later categorized as themes. We examined the hierarchical relationships among all the codes and grouped them together into several larger categories. While constructing the themes, we carefully examined the frequency and uniqueness of codes in terms of our research question. We had peer debriefers, doctoral students in the field of education, to ensure that the way we interpreted interview data and postings were appropriate.

The codes were grouped into categories and the categories were modified or recategorized as we collected and analyzed additional data throughout the data analysis process. To ensure the validity of our findings, we also conducted *strip analysis*. Strip analysis is a method in which a researcher selects a small portion of a primary record and examines whether that part fits the constructed codes or structures (Carspecken, 1996). We selected some primary data from archived postings and examined whether the raw data could be explained by the theme. If we found some discrepancy we examined other generated codes and raw data or conducted some follow-up interviews to generate codes that fit the original data.

RESULTS AND DISCUSSION

The results of this study indicated that there were five reasons why teachers wanted to participate in online communities of teachers: (a) sharing emotions, (b) utilizing the advantages of online environments, (c) combating teacher

isolation, (d) exploring ideas, and (e) experiencing a sense of camaraderie. Although all of these reasons are interrelated, each reason must be considered separately to understand the reasons for participation as a whole.

Reason 1: Sharing Emotions

Interview participants expressed that they participated in the communities to share emotions related to teaching. Nancy said, "Teaching is a hard profession. We get emotionally involved. It's nice to give and share those emotions with one another." Postings in the communities supported this claim that sharing emotion was one of the reasons for participation. We found not only that many postings in the communities were related to sharing emotions but also that such postings often received great attention. For example, one teacher shared the stresses associated with multiple responsibilities in Teacher Focus. This post received 72 replies and had been viewed more than 11,400 times as of May 24, 2007. Considering that each post generally received one to eight replies and the number of views for each post was often slightly lower than 700, the large number of responses and views may indicate that teachers were interested in reading and responding to topics related to emotions.

Teachers in this study shared both negative and positive emotions related to teaching. Below we provide several examples of sharing emotions within the communities. A first-year eighth grade teacher in Teacher Focus shared her struggle with one particular class:

> No matter what I do, they seem to think they can walk all over me…. They continue to stroll in late, proud of it, even. They say things like "faggot," etc…. Several students target me…. They constantly talk when I am talking—not a few students, but the whole entire class!! Every day I am going home angry/upset, and I have one student who is ready to switch out of the class because he cannot focus/learn. I feel horrible… Any suggestions will be welcome. I feel like it couldn't get worse. (January 3, 2007, in Teacher Focus)

Responses to postings about negative emotions such as this one were divided into two types: offering emotional support and providing possible solutions. Eleven teachers commented on this posting, demonstrating both categories of response. We provide three responses below, identifying respondents as T1, T2, and T3.

> **T1:** I don't have any suggestions, but I have one class like this as well. I try to remember that 5 of my 6 classes are not generally like that, so although I do think there must be things I can do to improve the situation, it doesn't necessarily mean I'm a terrible teacher. It just means that I have some learning to do about how to work with kids who are like this. Try not to be too hard on yourself. It sounds like a tough group. Anyway, you're not alone!

The response of T1 provided emotional support. She shared her past experiences and encouraged the original poster, saying, "You're not alone." The

analysis of postings suggested that this type of phrase continually occurred whenever teachers shared their struggles. Interview participants explained that they felt encouraged after they realized that all teachers struggle, implying that teachers may share negative emotions in the communities in order to receive encouragement from their peers. The second response provided a possible solution, asking for help from an administrator.

> **T2:** I would enlist the help of an administrator if I were in that situation…. Another adult in the room frequently causes drastic changes in behavior amongst students. You may even be able to use that glimpse of their "good" side(s) to help bring about the necessary change. Keep your head up.

Because many teachers participated in this community, a wide variety of solutions were shared. For example, T3 first quoted the poster's expression, "They constantly talk when I am talking." He then provided a solution to this problem, directly talking with each student.

> **T3:** Hmm…I have gone around the room and spoken to each person quite directly on occasion, as in "I expect you to pay attention when I am talking." You might find it necessary to be quite confrontational—do so….

An analysis of postings indicated that when one teacher posted about emotions, it encouraged other teachers to share their own problems. For example, a teacher in Teacher Focus shared her disappointment with teaching, and that post led to other teachers expressing similar emotions.

> **T1:** I have been trying to have a positive attitude but every day I am drained by the end of the day and feel totally defeated…I am tense all the time. I actually think I had an anxiety or panic attack yesterday… It is just getting really bad (December 3, 2006, in Teacher Focus).

> **T2:** Your posts sound like I typed them myself! Seriously. I feel the same way. I've never been physically ill over a job, until now. I've always enjoyed my jobs. I feel defeated, I cry, I question it over and over and over. My thoughts on the whole thing consume me!

> **T3:** Sign me up for the support group! I am not glad that any of us are in this situation, but I am glad to know that there are other people out there who feel the same way. When I went to the doctor to see what might be causing my symptoms, I actually started crying because I felt like such a traitor! Who's ever heard of a teacher who hates to teach?!

In the postings above, teachers shared their suffering associated with teaching, and sharing seemed to help them realize other teachers struggled with similar problems.

In contrast to the postings concerning negative emotions, we observed teachers also shared their happy teaching moments in the communities. For example, a teacher in T-LJ wrote about his excitement about teaching:

> **T1:** I feel like I'm the only person in the entire state of Massachusetts who doesn't want the school year to end. I *love* going to the school. I *love* seeing my kids…. I *love* how I once planned a lesson in my sleep. I *love* how every day is something new and that nothing ever repeats itself….(June 5, 2006, in T-LJ).

When teachers shared postive emotions, others often appreciated the posts and shared similar experiences. For example, a teacher replied:

> **T2:** This post made me smile this morning, thank you! :D I have been teaching for two years now, and this year I was sad to see the year end. I love my kiddos! And…I planned a lesson in my dreams recently, woke up, wrote it down…and then I thought I had serious mental problems for doing so. I am glad to see this happened to someone else!

In summary, these results suggest that many teachers participate in the communities to share both negative and positive emotions related to teaching. Sharing appears to help teachers receive emotional support and a variety of solutions to issues related to teaching.

Reason 2: Utilizing the Advantage of Online Environments

The analysis of interviews and observational notes suggested that online environments provided places where teachers could safely share issues that they could not share with local school teachers. The interview data indicated that teachers were concerned that they might be seen as incapable teachers if they shared problems or asked questions in their local schools. Nancy said:

> It is hard to look at a colleague at work and explain that we are struggling with the same group of kids that are acting perfect in their classroom. You often get the "look" from them. On the Internet, there isn't a disapproving look; there is just advice.

Ava made a similar comment: "I can ask the people on the computer anything and not feel intimidated by their response because they don't personally know me, and I wouldn't feel stupid or anything." A posting in Teacher Focus also supported this claim:

> As a new teacher I think sometimes there can be a lack of support in the actual school, you're afraid to tell people when something goes wrong because they are your coworkers. My advisor even told me not to tell anyone because it can affect my hiring back for next year. (October 25, 2005, in Teacher Focus)

Another possible reason teachers participated in the online communities was that online environments provided them with opportunities to communicate with a large audience. This might help them receive diverse perspectives from different teachers, and a variety of opinions could help them view situations from a different point of view. Judy stated:

> Everyone is coming from all different parts of the country and world. They are able to offer so many different perspectives and views that perhaps I wouldn't be able to find in my own community, where we may tend to think the same way. Others are able to offer different insights and approaches that maybe I would not have come across otherwise.

In online communities, there are chances to communicate with teachers who have had similar experiences or can provide some useful solutions. Anna stated, "In the online community, you are sure to find others who have 'been there, done that' and can either commiserate or give you solutions."

In summary, these data indicate that teachers participate in the communities because the online communities enable teachers not only to share issues that they might not be able to share in their local school but also to communicate with teachers who have a wide range of experiences.

Reason 3: Combating Teacher Isolation

From the interview participants, we found that some teachers participated in the communities due to isolated school environments. For example, teachers who worked in isolated places stated that a reason they participated in online communities was to meet teachers who share common interests. Dick stated:

> I first became involved with online communities while working in Saudi Arabia as a third grade teacher. Since my school was very small (only one teacher per grade level at the elementary school), the best way for me to discuss curriculum and other concerns with fellow third grade teachers was through websites.

Sometimes, isolation is not a matter of location; it is matter of whether there are available people who can understand specific issues in schools. For example, Sophia claimed:

> In most of the schools I worked in there was no place to talk with other teachers about day-to-day things. I often found myself isolated with people who did not understand or care about my subject or the problems I was having teaching certain concepts. There was no one to ask.

Even teachers who could share common interests with colleagues in their local schools felt isolated because there was no time to talk. Kathy said:

> I enjoy talking to the teachers in my building, of course. It's just that there is so little time during the workday that we actually see

each other. These kinds of conversations are only possible outside of school, and when we aren't caught up in the rest of our lives. For me, that's early morning when no one else is up. My local colleagues are also getting up and getting ready for the day at this point. I don't call them at 4:30 a.m. to chat about work!

Consequently, these data indicate that teacher isolation encourages teachers to participate in the online communities as a way to reach out to other teachers who may understand issues related to teaching.

Reason 4: Exploring Ideas

Regardless of their level of teaching experience, interview participants claimed that they participated in the communities to explore new ideas. During interviews, Savannah explained her reasons for participation in this way:

> I would like to find more creative ways to teach; the resources are never lacking, I just like to 'switch things up a little bit.' I am a very creative person by nature, so I like to be creative with the lessons I plan.

The analysis of postings in the communities suggested that the reason teachers explored teaching ideas in the communities was that teachers searched for very specific ideas that were appropriate for their unique teaching situations, and their unique needs were often met in the communities. Below is an example of how teachers' unique needs were met in the communities. A teacher asked for ideas about teaching poetry for second graders in T-LJ:

> This quarter in language arts, 2nd graders will learn about poetry—both reading and writing it…one of the first lessons in our writing guide has the class write a poem together about an object.… I'm not sure how to do it, but I know the first hurdle is to find an object that they would enjoy writing about—and do well at.… Any suggestions? (April 7, 2007, in T-LJ)

Seven teachers provided various ideas such as specific book information or instructional strategies. Four of the reponses are described below:

> **T1:** I would start with an acrostic poem about spring (since that's the current season) and acrostics are the easiest to teach.
>
> I taught my grade 2's an important poem based on the Important Book by Margaret Wise Brown, and it had a lesson on overhead where they followed along, wrote a little, conferenced with a buddy, and at the end I proof read them all before they wrote a good copy. The poems were SO GOOD that I laminated them and bound them into a book, and the kids take it home to read it with their families, and they write comments in the book about it.
>
> > **T2:** We did much the same thing with the Important Book, only each child wrote an important poem about their grandparents

that they made into a tri-fold book for grandparents day. The grandparents were all very excited about it.

T3: To start, I would probably bring an object in. To stick with spring, you could use a flower. Everyone could brainstorm what they see, smell, feel, taste, hear (if anything).

T4: I observed an ESL class last year that did this, except instead of an object, everyone went outside for five minutes to jot down things they noticed using different senses. Then they all went inside and wrote a short poem about spring, using whatever they noticed outside.

Analysis of postings indicated three patterns that commonly occurred when teachers shared ideas in the online communities. First, teachers explained what they did in their own classrooms and how well it worked. T1 and T2 explained in detail how they taught their own classes based on *The Important Book* and the results of those classes. The analysis of interview data suggests that members liked to participate in the communities because they could explore ideas that were proven to work in actual classrooms. For example, Nancy said:

> It is nice to see practical lessons that are effective in the classroom. There have been many experiments that I have started in the classroom that didn't work, which caused disappointment with my students. Sharing is very important in the field of teaching. I can purchase a book in the store, find a great activity, try it in the classroom and it fails horribly. Or I can come on WeTheTeachers and find an activity that other teachers have proven to be successful and succeed in the classroom.

The second pattern is that a variety of teaching ideas are shared. In the example above, at least four different types of teaching ideas were shared: (a) book (The Important Book), (b) ways to write a poem about an object (sense the object first and write a part of poem), (c) possible objects (flower), and (d) follow-up activities (create a book and share it with family). This example suggests that new ideas may be continually generated through sharing, so teachers can acquire them when they participate.

The final pattern is that teachers who teach different grade levels or subjects share together. In the example above, T4 shared an experience in an ESL class that she observed. Interview participants claimed that they liked reading various postings because those postings helped them broaden their perspectives and create even more ideas. Sophia said, "Forum postings in WeTheTeachers have broadened my horizons beyond science. Seeing how reading and writing teachers handle assignments is very helpful in science. They use strategies I was never taught."

In summary, these data suggest that teachers participate in the communities because they can find a variety of ideas that may be appropriate for their specific

situations. Moreover, reviewing postings where teachers shared their own ideas assists them in developing new lesson activities and reflecting on their own teaching practices.

Reason 5: Experiencing a Sense of Camaraderie

Interview participants claimed that the primary reason they continually participated in the communities was because of a sense of camaraderie. Hannah said, "It is for a feeling of comradeship. 'I'm not the only one bad things happen to!' and stuff like that." Jessica made a similar statement: "It helps keep me grounded. The easiest way to explain is that I realize I am not alone in my frustrations, I am not alone in my success." Sydney explained that she participated "mainly to interact with people who share my life experience. I like being around folks who do what I do and discussing that."

From the interviews, we found teachers' initial participation was related to specific needs such as sharing emotion or exploring ideas. However, a sense of camaraderie was developed during participation, and these friendships encouraged them to participate more in the communities. Hannah stated, "I originally joined T-LJ for lesson plan ideas and classroom management help. Now I stick with it because I enjoy reading other people's concerns, and what conditions are like in other states or countries." Bob has a similar experience. He said, "I went looking for teaching resources one day, and sort of stumbled on the forum via a link in a search engine. I lurked a bit, and then sort of plunged ahead."

In summary, these data suggest that many teachers continually participate in the communities because of the sense of camaraderie that they have developed with fellow teachers.

A Model of Teacher Participation in Online Communities of Teachers

Based on the data in this study, we have illustrated the relationships among the five reasons for participation in the three communities in Figure 1 (page 298).

Analysis of data suggests that all five reasons are interrelated. Sharing emotions is integrated with other reasons in that teachers seek ideas and advice on possible solutions to their problems. Allowing anonymous participation online encourages teachers to share problems that they may not be able to discuss in their local schools. Teachers also develop a sense of camaraderie when they share ideas and emotions, showing how all of the components are related. This implies that a holistic perspective is necessary to fully understand teacher participation in the online communities.

Figure 1 suggests that one of the critical roles of the online communities in this study was providing a safe forum where teachers could freely share emotions associated with teaching. Teaching is an emotional practice (Hargreaves, 2001). A variety of emotions arise when teachers interact with students, parents, and administrators. The findings indicated that teachers wanted to share emotions with peers who understood their situations and would not judge them based on their experiences and feelings. Some teachers could not find such people in their local schools (Baek, 2002), but online environments enabled a

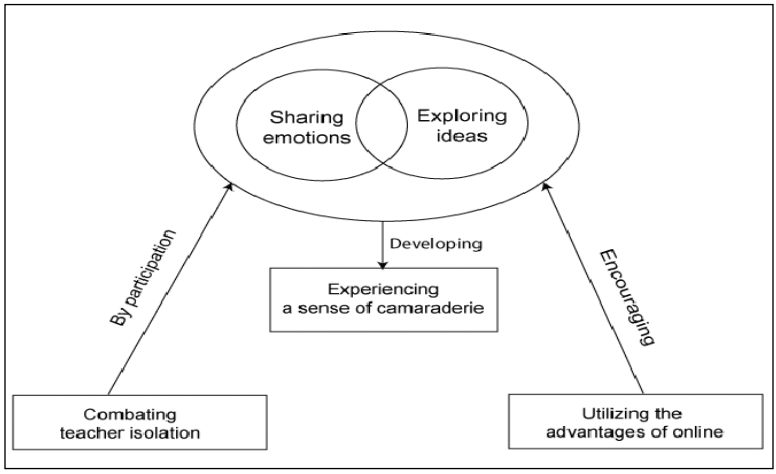

Figure 1. Relationships among the five reasons for participation

diverse people with different experiences and perspectives to come together and support each other.

Anonymous participation particularly allowed some teachers to have more open discussion; teachers were able to express emotions that they could not share with other people and ask for help without fear. However, anonymous participation does not necessarily mean that teachers want to hide their identities. Some teachers share their own pictures and even reveal their real names. Anonymous participation is a personal choice, and we observed that many members did not share personal information and used pseudonyms. Participants indicated that they liked anonymous participation because it allowed them to share issues without fear of retaliation at school. Susan stated:

> Teacher Focus is a good place to come to unwind after the stresses of the day. I am able to vent and share about a specific colleague without repercussions in my work environment. The anonymity in cyber land allows that detachment without hurting anyone at school.

Others explained that anonymity helped them reflect on situations with objectivity. Amanda stated, "I have to say that I like not having LJ members know much about me.… Sometimes my coworkers' advice…has emotions and personal feelings tied to it. LJ members don't have those preconceived notions influencing their comments."

From a teacher professional development point of view, the findings imply that creating an environment where teachers freely share issues and emotions and receive appropriate advice and support is critical. This study demonstrated that online communities of teachers could be a useful way to provide such assistance (Barnett, 2002).

Figure 1 also suggests that learning occurs through participation in communities (Lave & Wenger, 1991; Wenger, 1998). Social learning theorists propose that knowledge is the outcome of ongoing interactions with groups of people (Lave & Wenger, 1991; Resnick, 1991). The results of this study presented that sharing ideas and advice with other teachers in the communities assisted teachers not only in acquiring new ideas but also in reflecting on their own teaching strategies. In other words, teachers in this study continually learned during the process of participation in the communities.

The finding of this sense of camaraderie in Figure 1 is consistent with the study by Ellis, Oldridge, and Vasconcelos (2004) in that the most crucial aspect of an online community is not the information shared in the communities, but rather the sense of belonging that participation engenders. This implies that creating methods of assisting members in developing a sense of camaraderie is critical to cultivate sustainable online communities.

IMPLICATIONS

The results of this study indicated that, to improve teacher professional development programs, educators need to further examine the following two areas:

Teacher Emotional Sharing

The findings demonstrate that teachers want to share both knowledge and emotions, implying that the relationship between teacher emotional sharing and teacher professional development needs to be further explored. Despite the importance of emotional aspects in teaching, there is a lack of understanding of how teachers' emotions affect teaching and teachers' professional work (Sutton & Wheatley, 2003). Previous research concerning online communities of teachers did not emphasize emotional aspects. Many studies (e.g., Moore, 2003) describe online communities as knowledge-sharing places, yet they did not consider emotional sharing as a critical component. Consequently, more research should be conducted to understand teachers' emotions and the impact on teacher work and teacher learning.

Methods to Strengthen Teachers' Self-esteem and Support Teachers' Confidence

Emphasis on sharing emotions also implies that educators need to develop methods to strengthen teachers' self-esteem and support teachers' confidence. One possible explanation for why teachers in this study freely shared emotions in the online communities (whereas teachers in other communities did not) is that the communities included in this study anonymous participation. Teachers stated that they feared being viewed as incapable if they shared problems or sought advice from others. Therefore, anonymity in the online communities assisted teachers in being more open to sharing emotions, discussing issues in schools, and asking for advice. Previous research also shows that even though teachers acknowledge their dissatisfaction regarding their teaching practices, they also need to feel that their teaching practice is acceptable overall; teachers do not expect their knowledge or expertise to be questioned (Bell & Gilbert,

1994; Fiszer, 2004; Wilson & Berne, 1999). From this finding, we can speculate that the reason teachers do not generally share emotions in other communities, such as those developed by university faculty, is that teachers may think that their discussion will be analyzed and evaluated for a research purpose or that faculty will consider them incompetent teachers if they continually ask for help. Therefore, providing methods to strengthen teachers' self-esteem and support teachers' confidence is critical when designing teacher professional development programs.

CONCLUSION

Despite the growing popularity of teachers' participation in self-generated online communities, there has been a lack of research concerning these communities (Hur & Hara, 2007). We expect that the number of teachers who participate in online communities of teachers will continue to grow because of a variety of benefits that teachers receive through participation, including emotional support and new knowledge. This implies that more research should investigate self-generated online communities of teachers. Future research might need to focus on teachers' professional growth through participation in online communities and teachers' emotional sharing and the impact of those emotions on job satisfaction and student learning. We also suggest exploring how to design online communities that can help teachers freely share both emotions and knowledge.

Reasons for participation in the online communities in this study might not be typical for all online communities of teachers. The purpose of the selected communities is to share issues related to teaching. Therefore, our findings cannot be generalized to online communities with more distinct purposes, such as sharing ideas for teaching mathematics, nor can the findings be generalized to all teachers in the communities in this study because of the small number of participants. However, we believe that the findings of this study have provided critical insight into various reasons why teachers participate in self-generated online communities and suggest crucial areas that future professional development programs should emphasize. Namely, more emphasis needs to be placed on teachers' emotional sharing and promotion of self-esteem.

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