

Informal Inquiry for Professional Development among Teachers within a Self-Organized Learning Community: A Case Study from South Korea

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Abstract

This study explores how informal inquiry among teachers occurs in pursuit of their professional development within a learning community that has been voluntarily constructed by South Korean teachers. To this end, the study investigates what leads teachers to participate in a self-organized learning community, how informal inquiry occurs in the community, and what this informal inquiry means for teachers in the community. The findings show that learning communities self-organized by teachers have the force to maintain and develop themselves without any external rewards or support because of the similar status and work experience of the teachers and the resulting parity in their relationships. The findings also demonstrate that through informal inquiry, some teachers have not only increased their knowledge of instructional practice but also transformed their attitudes toward the teaching profession. The study indicates that by providing opportunities for teachers to keep developing their professional identity and sense of autonomy, a self-organized learning community can become a place that contributes to helping teachers become “reform agents” capable of continually improving their teaching practice.

Keywords: informal inquiry, teacher learning, teacher knowledge, self-organized learning community

1. Introduction

Recent social changes require teachers to continue to learn through the span of their teaching career, and recent studies on teacher learning (Bransford, Darling-Hammond, & LePage, 2005; Darling-Hammond, Hammerness, Grossman, Rust, & Shulman, 2005; Hammerness et al., 2005) have reflected this current environment.

Traditionally, teachers have often passively received knowledge they seemed to lack or need, usually through a teacher training course, and applied it to their practice. However, this traditional approach has been criticized because of the gaps between theory and practice that can make theoretical knowledge learned in training useless in practice (Putnam & Borko, 2000). Since classroom situations are unpredictable and complex, teachers should always be able to create new strategies and knowledge in order to handle them. Knowledge imparted in a teacher training course without consideration to the contexts teachers face is not sufficient to solve problems in reality. Therefore, teacher learning should be approached not from a knowledge acquisition perspective but from an inquiry perspective. Recent attention to teacher learning has focused on self-directed inquiry and learning rather than on teacher training offered by outside experts, and the effort to build learning communities has reflected this attention.

It has been pointed out that collaborative inquiry among teachers is a method with the potential to redefine the teacher's role in teaching practice and develop teachers' professionalism (Cobb et al., 2003; Darling-Hammond & McLaughlin, 1996). Due to this potential, studies on collaborative inquiry among teachers have burgeoned over the last two decades focusing on cooperative construction of knowledge among teachers. In many studies, collaborative inquiry has been supported because of the possibility of making new connections between created knowledge and teaching practice (Cochran-Smith & Lytle, 1999; So, 2013). Additionally, teachers' efforts at collaborative knowledge construction in this context have been considered a major means to achieve not only self-directed professional development but also the construction and sharing of a knowledge base created by

teachers themselves (Loughran, 2003). In particular, the partnerships and cooperative relationships built through collaborative knowledge construction have been appreciated for the way they can help teachers recognize the challenges of their practice, interpret and respond to them, and transform their work in the broader context of education reform (Hargreaves, 1997; Rust & Meyers, 2006).

Much of the literature on teacher learning (Au, 2002; Cochran-Smith & Lytle, 1999; Grossman et al. 1999; Oakes, Franke, Quartz, & Rogers, 2002) suggests that collaborative inquiry by teachers can be promoted by the formation of a learning community. According to this literature, beginning teachers in particular can learn more within a learning community, working with experienced teachers as well as their peers. Writing from a situative perspective on learning, Borko (2004) suggests that learning is accelerated when teachers try to solve the problems and issues they face in their practice in collaboration with their peers as well as teacher educators. Vygotsky (1978) also emphasizes learning with others, mentioning that learners can learn more than expected if they are provided with proper scaffolding. On this basis, it seems clear that learning communities of teachers can have a significant impact on professional development.

Although teachers' learning communities can have various purposes, their main aim is to improve teaching practice (Liberman & Miller, 2004; McLaughlin & Talbert, 2001; Westheimer, 2008). These communities are usually classified either as "self-organized" or as "supported" by outside universities or other organizations (Nickols, 2003). In contrast to many past studies, our research focuses on the former category. We examine how informal inquiry occurs within a self-organized teachers' learning community. To achieve this aim, we consider the following research questions: What leads teachers to participate in a self-organized learning community? How does informal inquiry occur in the community? What does this informal inquiry mean for the teachers in the community?

2. Theoretical Background

2.1 The Learning Community as a Context for Teacher Learning

The prevalent conception of teacher learning has been influenced by existing theories of learning in a community of practice (Au, 2002; Cochran-Smith & Lytle, 1999; Grossman et al., 1999). This attention to learning in a community of practice grew out of various research traditions in various countries. It can be traced back to the social psychologist Kurt Lewin (1890–1947), the educational philosophy of John Dewey (1859–1952), and the "collaborative research" movement between teachers and university researchers in the early 1950s (Zeichner & Noffke, 2001). It has been notably influenced by cognitive psychologists who have focused on the situative and contextual characteristics of learning (e.g., Lave & Wenger, 1991; Vygotsky, 1978).

A professional community built on the basis of shared norms and practices can have a strong impact on learning among its members. Collaboration within a learning community involves teachers working together on several aspects of their profession: evaluating students' progress, planning and implementing new teaching practices, and reflecting on their teaching. By participating in a learning community, teachers can not only improve their teaching practice but also stimulate and renew their intellectual growth. The central value of this approach to professional growth is that it breaks teachers' isolation and has them compare and collaborate on solutions to tasks based on their own practice (Darling-Hammond & McLaughlin, 1996). Furthermore, by providing a site in which teachers with different kinds of expertise can come together, a learning community pushes teachers to the edge of their growth, or their "zone of proximal development" (Vygotsky, 1978).

In a learning community, teachers do research by means of repeated processes such as acting, reflecting on the acting, re-planning, and acting again. Teacher learning occurs with collaborative support and challenges from peers, throughout these repeated processes (Reason, 1999). It has been argued that a learning community plays an important role in making teachers reflect on their own practice and improve their teaching, as well as helping them place a critical eye on their own work. In addition, membership in a learning community encourages teachers to become lifelong learners, developing and improving their practice over the course of their career (Cochran-Smith & Lytle, 1999; Cochran-Smith & Lytle, 2009).

2.2 Characteristics of a Teacher Learning Community

The key to community could be described as "we-ness." According to Westheimer (1999), the main aspects of community include shared belief and understanding, interaction and participation, interdependence, respect for minority opinion, and constructive relationships. A community—and this is also true of a teacher learning community—is not a just simple gathering of individuals but a group of participants who build constructive relationships by sharing a mutual vision and mutual sentiments; dedicating themselves to the group; and depending on, understanding, and respecting one another. A teacher learning community, of course, can be

specifically distinguished from other kinds of communities by its focus on teacher learning.

A further aspect of learning communities is the process of collaborative sharing and reflection on practice among members. Teachers learn by asking, reflecting on, and examining their teaching routines cooperatively with their peers in the community and implementing what they have learned in their classrooms (Little, 2003; McLaughlin & Talbert, 2006; Mitchell & Sackney, 2000). In the course of developing and sharing these methods together, they build up a distinct collaborative learning style and ways of describing, discussing, and reflecting on teaching practice (Cochran-Smith & Lytle, 2002). This learning style is in distinct contrast to the traditional situation in schools, which Lortie (1975) has likened to “egg crates,” in which individual teachers work largely in isolation, within separate rooms. Teachers improve their practice and develop professionally by repeating processes; sharing and reflecting on the knowledge, experience, and practice gained thereby with peers in a learning community; and putting what they have learned into action.

The last aspect that needs to be mentioned here is shared leadership on the basis of relationships of equality among members (Hord, 1997; Morrissey, 2000). Learning in a teacher learning community is different from teacher training, in which teachers receive knowledge unilaterally from recognized experts, in a hierarchical culture based on these rigid roles.

In addition to the inherent aspects of learning communities mentioned above, a teacher learning community has extrinsic characteristics as well. These correspond with supportive conditions (Hord, 1997) such as physical conditions and people’s capacity. Since learning in such communities is ongoing, regular meetings in a specific space are a prerequisite. In addition, members in a learning community should be open-minded toward feedback from one another and have the will to improve. Furthermore, they should express an attitude of respect and trust for their peers and have a cognitive and technical base suitable to teach and learn effectively (Hord, 1997; Louis, Kruse, & Bryk, 1995).

3. Methodology

3.1 Context and Participants

For over 60 years, the South Korean education system has operated under a national curriculum framework, in which the government has mandated a compulsory, detailed curriculum of all elementary and secondary schools. Teachers have thus lacked autonomy to determine class content. Teacher education has been administered by national or local teacher training institutes. Teachers have had a lack of opportunity to learn while teaching. However, since the Korean government announced a new policy handing authority over curriculum decision making to districts and schools, the number of (online and offline) self-organized teacher learning communities has increased.

To select a case for this study, we looked at the homepages of teacher learning communities across the country, and from these selected several candidate cases. The most important criterion for case selection was the sustainability of the learning community. We judged communities sustainable when they set aside some amount of time for meetings, and the meetings continued regularly, because in these cases participants had more opportunities to create and develop ideas together, in relationships built on mutual trust and respect (Cochran-Smith & Lytle, 1999, 2009; Hindin et al., 2007). We asked representatives from our candidate cases to participate in the study by telephone or email, and chose the one that accepted our request.

The setting for this study is a self-organized learning community established by elementary school teachers from various schools in Seoul. This community has had a regular meeting every other week since its creation in 2008. Its members met in private study rooms or cafés in downtown Seoul after work on weekdays. Because of the autonomous nature of this community, the number of participants was not consistent from meeting to meeting, but it was always between four and six. At the meetings, teachers talked freely about their idea and about situations in their classes. The specific goal of the community at the time this research was conducted was to improve their social studies classes based on a shared vision. Although they belonged to different schools, the members of the community developed an online network for a research space, in which they could share teaching materials and ideas at any time.

When starting this research, we selected three teachers who had participated in the community steadily for more than one year as our focal cases (Merriam, 1988) to provide in-depth descriptions of participation in the community and to enable us to better understanding of the community dynamics. All three of these individuals were female fifth-grade homeroom teachers. Teachers Park and Lee had been working for five years in Seoul and had each been participating in the community for one-and-a-half years at the time we started this research, while teacher Kim had been working for four years in a suburb of Seoul and had been part of the community for one

year and two months.

3.2 Data Collection

Observation, artifact collection, and interviews were used as data collection methods. Over about eight months, from August 2009 to April 2010, we observed 12 biweekly group meetings. Each meeting lasted for two-and-a-half to three hours; all conversation among teachers was recorded and transcribed, and we took field notes regarding the overall flow and atmosphere of meetings as well as the teachers' activities and interactions. Additionally, we collected various artifacts, such as teachers' lesson plans, journals reflecting on their classes, and class materials they had posted online, as well as some materials they had brought to group meetings. Finally, we recorded and transcribed interviews with the three focal teachers in order to obtain additional information. We interviewed them frequently during observation and after meetings, with a single interview lasting one or two hours.

3.3 Data Analysis

We followed the coding method of Strauss (1987). First, we repeatedly looked over all the data in order to understand its overall flow and contexts, and tried to find thematic trends and patterns across the three data sources. Through an iterative process of coding, we extracted three meaningful categories, which were the basis of our research questions: (a) teachers' motivations for participating in the community; (b) their activities in the community; and (c) the perceived significance of those activities according to them. We then reviewed all data associated with each category, considering how well data fit the category to which it was assigned. After repeated review, we identified several regularities in content within the three categories and labeled them with sub-codes within each category. Finally, all data was re-reviewed, this time against the updated codes, in a recursive process of reading and labeling. Through this process, the final themes and subthemes, which are the major findings presented in this article, were selected; data was then re-analyzed according to these themes. The final results were cross-compared across the three data sources several times to confirm their validity, and where necessary, a member-checking process employing the participants was used to validate our interpretation of the data.

4. Findings

4.1 Understanding Participation in a Self-Organized Learning Community

It is not easy for teachers to voluntarily establish a learning community outside of school or continue to participate in it (Orland-Barak & Tillema, 2006). In particular, there is no guarantee of continued participation on the part of any member, because a self-organized teacher learning community is typically unregimented and lacks external controls or incentives. Nonetheless, the informal learning community considered in this study had already lasted for more than a year at the time we started this research. The results of our data analysis show two factors affecting continuation of participation: 1) a strong desire to change teaching practices and 2) similarity of backgrounds and interests among participants.

In the summer of 2008, Lee, who later became a leader in the community, attended a workshop organized by a group of teachers. There, she learned skills needed in her classroom, such as how to encourage students to collaborate, how to counsel students effectively, and how to adapt the national curriculum. In particular, the discussion of the latter was a unique experience to her. She recounted this experience at the interview:

It was a big surprise to me because I hadn't thought about reconstructing the national curriculum. I used to think that I was a kind of puppet conveying the fixed national curriculum to students. I was discouraged and frustrated that I couldn't have many choices. However, the workshop encouraged me to reconstruct the curriculum based on what I think important and valuable.

On the basis of this experience, Lee sought out others interested in reconsidering the use of the national curriculum for their classes. Some elementary school teachers who attended the summer workshop showed interest in her ideas; when Lee suggested that they create a group to improve their teaching methods for social studies, a few of them (including Kim and Park) agreed, and the learning community was launched.

Teachers were motivated to participate in the community because they felt that there was something wrong or suboptimal with their teaching practice and wished to seek alternatives. Kim delineated the problem at her interview:

In my class, I feel very cut off from what I think is important and valuable. I don't know whether I have to teach as the nation determines and stay neutral, or whether eventually true education will occur.

Participants shared several problems like this with the community. For example, Park was not satisfied with

textbook content that adopts a neutral or objective pose and sometimes focuses less on the importance of sustainable development or of values such as wellbeing and morality. Participants agreed that they needed to teach such values by adding or adapting content.

Lee: There are lots of things to discuss in the economics part, I think.

Park: I don't think we should teach as the textbook says.

Lee: Have you already taught economics several times?

Park: Yes. So, I think we shouldn't teach as the textbook says. In economics, important issues such as true economic development and wellbeing need to be addressed. I think it is a problem to emphasize economic growth unconditionally.

As mentioned, similar backgrounds and interests were another key element that kept teachers participating voluntarily in the community. The main reasons they continued to participate in the community were these similarities as well as their similar ages, which made them excited about building collaborative, trustful relationships. This was illustrated in the interview with Lee:

I don't know what I can say about the reason why I keep coming to this group. It's interesting and besides, my friends are here. Above all things, I was so excited to work on reconstructing the curriculum with my friends! That's the only reason.

This comment shows that Lee prefers collaboration and inquiry with peers with whom she has a common background and interests—one of the major conditions for the preservation of a self-organized learning community.

4.2 Patterns of Teachers' Informal Inquiry

Members of the community took part in various types of informal inquiry: gathering materials and information, collaborating on new approaches, applying their ideas, and reflecting on their successes and failures.

4.2.1 Gathering Materials and Information

Lohman and Woolf (2001) identify “environmental scanning” as a self-organized activity engaged in by experienced teachers to improve their classes. It refers to a process where teachers search on the internet for alternative class materials, explore scholarly journals and documents to understand recent trends and research on teaching, and attend workshops and teacher training courses to develop new ideas. The teachers in our community engaged in environmental scanning of virtually all common print and audiovisual media, as well as consulting with colleagues and visiting cultural institutions and events for inspiration. After Park went to a photo exhibition held in an art museum with community members, she posted a journal entry on the online network:

On the fourth floor of the building, we listened to the purpose of the photo exhibition and an explanation of the children's program offered by the art museum. Among the activities offered by the children's program, what I liked the most was making a miniature house. The roof of the house was made with water bottles, which allowed sunshine to pass through. This would help to save electricity. Of course, it would also be great to introduce the students to the revolving house with big windows that can follow the sun. The class could be integrated with arts, social science, and science education.

These activities enabled teachers to develop various new perspectives from which to approach their teaching practice and to gather materials and information to apply to their classes.

4.2.2 Collaborating on New Approaches

Collaboration among teachers consisted of sharing their materials and ideas. Sharing happened over their online network as well as in group meetings. Focuses of this collaborative activity included setting a class's direction, sharing materials and information, brainstorming alternative solutions to problems, and sharing teachers' classroom experiences.

The initial activity engaged in by the teachers was the formation of a common perspective on instruction and class goals, on which they spent a considerable amount of time at the early stage. Based on this shared goal, the teachers discussed problems in their practice and suggested alternatives. This process and the common perspective they reached fostered the participants' sense of solidarity and responsibility, which was a decisive factor in their continued participation in the community.

The sharing of materials in meetings and online meant more than just the spread of knowledge. The teachers were able to obtain new perspectives on other teachers' materials and information, use them to solve problems, and learn about the process of development of other teachers' materials and strategies.

Much time in group meetings was spent brainstorming to examine alternatives to the national curriculum on some issue. The teachers brought various materials, information, and discussion cases to the group meetings in order to explore alternatives to their established class content and methods. In free conversation, they shared and blended their ideas and came up with new ones.

Park: When I taught the lesson about cutting edge technology, I showed Gattaca.

Kim: Isn't that an old movie?

Park: Yeah, the setting of the movie is a future in which parents can choose genes for their baby.

Kim: That's about genetic engineering. I taught that lesson with a robot. I found a good book in my school library, about a boy with an artificial leg. I thought about how we can use this advanced technology for a good purpose.

Lee: Oh, that's a good idea! I'd like to use your idea in my class. I can show both sides of advanced technology to make my students think deeply.

The teachers mostly talked about issues relevant to their own classes, for instance by sharing lesson plans or class situations for feedback. This helped them clarify their ideas for class and find alternatives through feedback from others. In this way, their teaching practice came to have a communal nature.

4.2.3 Applying New Ideas

Since we did not directly observe participants' classrooms, it was difficult for us to identify whether they were applying the perspectives and ideas developed in the learning community to their practice. However, we could and did analyze their practice indirectly through the lesson plans and reflective journal entries written after class and posted on the online network. For instance, Park wrote a journal about applying the idea of an "enterprise fair," which one of participants came up with during a meeting, to her class:

The Students were taught about the advantages and challenges of multinational companies. The homework had the students think about how they would run a multinational company and write about what principles they would enforce. During reading class, the students read each other's homework in small groups. Then the groups presented the principles they liked the most. A couple of groups came up with many good principles. I asked the students which principles were impressive and important. The students voted to set priorities.

Park had applied and expanded the idea of the enterprise fair into basic principles for running a multinational company, with the intention of teaching business ethics.

Lee took up the same idea but implemented it in different activities. She had students establish "companies," hold an exhibition to attract "investors," and evaluate each other's companies on the basis of the exhibition. Her lesson plan was posted to the online network.

<Lesson plan>

Step 1: (Warm-up) Showing a family who drinks Coca-Cola everyday like water and posing some inquiry problems

"Is it right for a company to pursue profits without considering customers' health or safety?"

"Let us think about a company that satisfies customers, environmental concerns, and its employees."

Step 2: Introducing a couple of good companies

Step 3: Establishing a company in each group

Step 4: Holding an exhibition to attract investors: Choosing a company for an environment-friendly award, a best-design award, and an innovative-idea award

This data shows that the teachers applied the materials and ideas developed in the learning community to their practice, but not uncritically or without changes; rather, they interpreted and transformed them in accordance with the class contexts within which they were working.

4.2.4 Reflecting on Successes and Failures

The teachers' reflections took the form of sharing their thoughts on classroom cases in meetings and via reflection journals shared online, giving the teachers the opportunity to compare classes and reflect on strong and weak points together. Through the journal entries, teachers recalled how they had designed their lessons and what students learned. In reviewing the journals, their colleagues found ideas for their own classes and food for reflection on their practice. Below is posted a journal entry of Park's describing an activity she conducted in her class; after reading it, Lee makes a comment that shows this kind of reflection.

I organized a discussion in class to teach regional geography. I made the students choose regions to live in like a village on a plain, a mountain, or the seaside. Students who chose the same region talked about the reason why they picked the place and why they didn't choose others. And then they convinced other groups to live in their village. The students actively participated in the discussion and found it interesting. But I'm wondering what they learned through this activity. The students said that if people preserve their region and consider their environment, we can overcome social and environmental problems caused by urbanization. Through what the students said, I came to feel that our students have ideas and potential to solve the problems of urban and rural areas. That was what I intended! The students suggested some alternatives to make their villages better by preserving the natural environment. I am looking forward to teaching about urban problems in the next class. (Park's journal entry, retrieved from the online network)

Your idea is so great! I had never considered doing this kind of lesson. Thanks to you, I've got a tip for my class. If I teach fifth grade again next year, I will do much better! (Lee's comment, retrieved from the online network)

In the meetings, teachers also talked about the principles upon which they based their teaching practice and the problems they faced, received opinions and advice from others, and reflected on them critically. In one meeting, Lee talked about her difficulty inspiring creativity:

When Park talked about the “enterprise fair,” I wanted to do that. So I introduced all kinds of social enterprises to my students. However, it did not stir up their creativity. All they did was copy what they had seen during the class. They came up with things that already existed. The important thing we can take from this class is that we should introduce only minimal examples and encourage students to create things on their own. To do so, we need to help students develop the tools required to think creatively.

The reflection journals and subsequent discussions externalized and thus allowed reflection on the teachers' tacit beliefs and practices.

4.3 Significance of Informal Inquiry for Teachers

Engaging in informal inquiry enabled the teachers in this community to enlarge their knowledge and understanding of teaching practice and transform their attitude toward their professional life.

4.3.1 Increased Knowledge of Practice

Informal inquiry in this community increased teachers' knowledge and gave them new avenues through which to apply it practically. Although the teachers were aware of some problems with the assigned curriculum, they did not have confidence in their ability to change it. Their experience of collaborative curriculum re-envisioning in the community enabled teachers to change the curriculum in pursuit of their collective and individual vision. They did not teach curriculum “as is,” but became confident enough to interpret and change it. Park described this experience as follows:

I felt that it was new because it was based on our vision. We could interpret the learning content we had to teach. I had always taught without such interpretation. It felt so great to interpret learning content for each other. I had never thought about what it would be like to teach after this kind of interpretation.

Kim also felt that she was becoming a more active learning catalyst by reinterpreting the national curriculum in accordance with her vision. At the interview, she said that this experience gave her job satisfaction:

Interpretation means attaching value and meaning to something. So, I have come to love teaching since I could interpret the curriculum on my own.

At the time of this study, the learning community was aiming to improve their teaching methods in social studies. Teachers shared their knowledge in the group meetings and expressed various subthemes of social studies in their class content. In the process, they realized that they lacked adequate knowledge of the subject matter and did not know how to approach the social issues involved; this led to more in-depth consideration of the subject matter. Park said:

While analyzing the lesson in economics, we drew a picture of what kind of economic activities we were looking for. However, the thing we realized was that we didn't know about the field of economics. As we didn't know about economics itself, we couldn't imagine our economic future. So, we decided to read some books about economics and share what we read. We recommended some books to each other, and it took us about one month to study them on our own.

What they learned independently was then shared in the group meetings. Discussing the content of these social studies subthemes, they increased their knowledge of and broadened their perspectives on the subject matter. Increased knowledge of the subject matter enabled them to develop various new activities in their classrooms.

These inquiries also enabled teachers to increase their knowledge of how to teach effectively, that is, their pedagogical content knowledge (Shulman, 1986). They learned, in a deep sense, the utility not only of different methods of teaching the same content but also of using the same method in a different way. For example, previously when Kim had taught debating in class, she had divided the whole class into two teams. However, Park suggested that she split her class into several different groups to bring more perspectives to the problem and give more students the chance to take part. The pedagogical content knowledge that teachers brought to the group is an example of knowledge-in-practice (Cochran-Smith & Lytle, 1999), a kind of knowledge that teachers obtain individually by trial and error when themselves teaching or when watching colleagues teach. By sharing and implementing this knowledge and then discussing the implementation in the meetings, the knowledge eventually became communal knowledge, produced by and available to the learning community.

4.3.2 Transformed Attitude toward the Teaching Profession

The inquiries conducted in the learning community provided teachers with an opportunity to think about their professional role, absorb new perspectives, and form new attitudes toward teaching. Before taking part in the group, the teachers had considered their role to be that of imparting knowledge. In beginning to think of themselves as generators of new knowledge instead of or more than conduits for preexisting knowledge, they felt that they were breaking from the role identified for them. Their new view of their status as professionals was affected by the experience of revising their class content collaboratively based on the emerging group vision.

The teachers also showed increased confidence in their teaching as a result of their group work, because their students showed a preference for the new approaches. They overcame their fears and expected to further increase their skills over the years. This was illustrated in the interview with Lee:

When I reconstruct curriculum and plan a lesson, I don't let out a sigh anymore; rather, I love to do it. I've got confidence. And I believe that I'll do it much better next year.

In addition to the social studies context, this confidence had an influence on the teachers' attitudes toward other subjects. Lee said:

I hated social studies, so I focused on improving my social studies class and teaching. Now, I'd like to work on improving my teaching in math, which my students hate. I'm not afraid. I know it'll take a long time. However, I believe that I can feel joyful in my math class, like my social studies class.

The teachers also came to identify themselves as continuous learners. In other words, they formed a "learning habit" influenced and inspired by the learning and teaching methods and ways of finding information that they had picked up from the other community members. They moved from planning and finding materials only when needed for their next classes to planning and preparing materials as a regular habit. For example, before joining the community, Park had usually used the internet to find lesson materials. However, she was so impressed by Lee's process, in which she prepared her lessons using a lot of books, that she became more aware of the importance of books to a teacher. Since then, Park herself has developed better reading habits. The teachers became more open to new information and came to try to engage in lifelong learning through their participation in the learning community. Their transformed attitude toward their work showed that a teacher learning community can function as a space for members to develop a more integrated form of professional consciousness, one that is self-creating and self-transforming (Zellermayer & Tabak, 2006).

5. Discussion and Conclusion

This study set out to examine closely how informal inquiry occurs within a self-organized teachers' learning community for the improvement of teaching. To this end, we explored three questions: 1) What led teachers to participate in a self-organized learning community? 2) How did informal inquiry occur in the community? 3) What did informal inquiry mean for the teachers in the community?

Our findings on the first research question reveal that the teachers sought out the learning community spontaneously out of their desire to improve their teaching practice. This result supports Cochran-Smith and Lytle (2009)'s argument that posing problems from one's own teaching practice can serve as a starting point for learning or inquiry. In addition, this study shows that a learning community is more likely to keep going if it consists of participants who have similar backgrounds and vision. However, contrary to Cochran-Smith and Lytle's (1999, 2009)'s expectation that a teacher learning community would be best maintained on the basis of equal relationships among teachers who have different positions and working experience, it appears that these

teachers preferred equal relationships with those who had similar positions and working experience. This difference may have something to do with the fact that this study was conducted in South Korea, which is often perceived to have a hierarchical culture of education.

The findings relating to this study's second question indicate that teachers perform various types of activities as part of informal inquiry: that is, they repeat inquiry-related patterns such as gathering materials and information, engaging in collaboration, applying ideas in the classroom, and reflecting on their results. In the process, group meetings and the group's online network emerge as useful vehicles for cooperative inquiry. As a tool to create situative understanding of practice, the interventions that come out of these inquiries can serve as a decisive scaffold for exploratory learning in collaborative settings (Orland-Barak & Tillema, 2006). The community's informal inquiry-related activities were framed, formed, and supported by intervention, specifically, the group meetings and online network, and the ideas and developments that emerged from them. Additionally, by applying collaboratively constructed knowledge and ideas to their own classrooms, the teachers came to see that learning was not primarily a matter of sharing academic knowledge but instead of collective creation and exchange of ideas and practice (Tillema & van der Westhuizen, 2006).

The findings regarding the third research question show that informal inquiry enables teachers to increase their knowledge of teaching practice. This result can be paralleled with the contention of Tillema and Westhuizen (2006) that collaborative inquiry by teachers increases their knowledge relating to practice. As we have identified in the present study, this increased knowledge specifically includes knowledge of how to reinterpret and improve curriculum, as well as knowledge of subject matter and pedagogical content. Furthermore, it appears that inquiry enabled our teachers to transform their attitudes toward the profession of teaching, recognizing that they are creators more than conduits for knowledge and fostering in them the ethic of the lifelong learner. This result supports many assertions (Cobb et al., 2003; Cochran-Smith & Lytle, 1999, 2009; Darling-Hammond & McLaughlin, 1996; So, 2013) that collaborative inquiry can be a method by which to redefine teachers' role in their practice and help them develop their professional identity.

This study has significance in that it examined a self-organized community, not an intentional one supported by university educators or external organizations. Generally, a learning community built under external support is hard to maintain if the support is withdrawn. However, as seen in this study, a self-organized community has the energy to maintain and develop itself autonomously, without any external incentive or support. Our study shows that this sustainability is thanks mostly to equal relationships among members with similar visions, positions, and work experience, and that a self-organized community can make a great contribution to enabling teachers to become true agents of change by providing them with the opportunity to develop a more active professional identity and sense of autonomy.

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