Impacts of CoP on Organizational Socialization in the Early Career

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This paper focuses on the relationship between participation in communities of practice (CoP) and outcomes of organizational socialization (learning and adjustment) early in the career. Results from responses of employees in a Korean IT company show that participation in CoP is more strongly related to adjustment (job satisfaction, organizational commitment, intention to remain) than to learning (sense of belonging to organization, role comprehension) when characteristics of CoP and degree of participation are controlled.

Keywords: Community of Practice, Organizational Socialization, Workplace Learning

Community of practice (CoP) refers to a group of people who generate new knowledge in the process of sharing their knowledge, experience, or insight on a common interest or a problem in a subject while they interact (Wenger, 1998). When workers who have common problems in their jobs meet in person or online and discuss the problems together, CoP grows and matures and community members create new knowledge collectively while participating in the community (Brockman & Dirkx, 2001; Orr, 1996; Somerville & Abrahamsson, 2003; Wenger, McDermott, & Snyder, 2002). Experienced workers may give tips to employees for solving a problem and the experiences of each worker may be integrated into a way to do the work more effectively. These kinds of groups are built naturally within or beyond organizations and are unseen in the organization chart. Learning that occurs in the CoP is work practice itself, rather than knowledge which explains the way to work, as in job manuals or checklists (Brown & Duguid, 2000). By providing the place to learn and practice living knowledge, CoPs are distinguished from many HRD programs in classroom settings.

There have been discussions of the value of CoP (Allee, 2000; Ardichvili, Page, & Wentling, 2002; Fontaine & Millen, 2004; Lesser & Storck, 2001; Wenger et al., 2002). Wenger and his colleagues (2002) stated that the benefits of CoP to community members are the opportunities to "improve experience of work" and to "foster professional development" (pp. 15-17). CoPs offer not only tangible assets, such as developed professional skills and business outcomes, but also intangible assets, such as relationships among people, a sense of belonging, and professional identity. CoPs help companies recruit and retain talent by offering employees opportunities to satisfy their needs to connect to professionals through development within beneficial communities (Wenger & Snyder, 2000).

Learning in the CoP is a process of building one's identity as a worker in an organization and in a community of workers. Participating in the CoP, workers are exposed to various problem situations at work, issues related to their work, and the opinions of their colleagues. They become accustomed to their work and become proficient. This socialization process exists in the heart of learning which happens to every CoP participant.

Problem Statement

With the advent of the knowledge-based economy, there are urgent needs for ongoing learning in the workplace. As CoPs are regarded as a learning strategy with which employees create and share knowledge, human resource development and knowledge management (KM) have led ongoing discussion about how learning occurs in CoP and what the benefits of CoP in business settings are (Allee, 2000; Brown & Duguid, 2000; Wenger et al., 2002). Despite increasing interests in the roles of CoP in the workplace, few empirical studies have evaluated impacts of CoP (Ardichvili et al., 2002; Mittendorf, Geijsel, Hoeve, de Laat, & Nieuwenhuis, 2006).

This study focuses on benefits of CoP in terms of learning outcomes. To identify the relationship between the participation in CoP and participants' organizational socialization, we investigated the following research questions:

1. What is the relationship between participation in CoP and organizational socialization?
2. To what extent do the characteristics of CoP explain variances in CoP participants' organizational socialization?
3. To what extent does the degree of participation explain variances in CoP participants' organizational socialization?

Theoretical Framework: Organizational Socialization

Organizational socialization refers to the process in which "one is taught and learns 'the ropes' of a particular organizational role" (Van Maanen & Schein, 1979, p. 221) and acquires knowledge and skill which are required to do one's work and adjust to work groups (Feldman, 1981). Organizational socialization is a process of learning and adjustment in that newcomers learn to understand their new settings (Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994; Louis, 1980; Ostroff & Kozlowski, 1992) and move "from outsider to integrated and effective insider" (Cooper-Thomas & Anderson, 2006, p. 492). Though every employee goes through this socialization process throughout his/her career (Van Maanen & Schein, 1979), it is especially important for newcomers to learn knowledge and skills and adjust to unfamiliar organization settings (Louis, 1980; Miller & Jablin, 1991).

Among various topics within organizational socialization literature, socialization outcomes research provides a theoretical framework for this study. It was agreed that there are two levels of organizational socialization outcomes (Feldman, 1981; Kammeyer-Mueller & Wanberg, 2003; Reichers, 1987). Kammeyer-Mueller and Wanberg (2003) named the two outcomes proximal and distal. Proximal socialization outcomes are results of employees' learning in the socialization process, such as mastering one's task, understanding one's role clearly, and acquiring know-how to maintain successful work relationships. Because of their close relationship with learning, proximal outcomes are regarded as contents of socialization (Chao et al., 1994; Klein, Fan, & Preacher, 2006), change and acquisition (Feldman, 1981), or newcomer adjustment (Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007). Proximal outcomes affect distal outcomes which are related to the feelings individuals have when they judge whether their adjustment to the organization are successful, such as feelings of satisfaction, work motivation, commitment, and intention to remain or leave the organization (Feldman, 1981; Kammeyer-Mueller & Wanberg, 2003; Reichers, 1987; Saks & Ashforth, 1997). Job satisfaction refers to "affective reaction to one's job" (Cranny, Smith, & Stone, 1992, p.1). Career commitment refers to "the strength of one's motivation to work in a chosen career role" (Hall, 1971, p. 59, cited in Blau, 1985, p.277). Organizational commitment is both affective and behavioral; attitudes include acceptance of the organization's values, and the willingness to contribute to the organization and maintain membership as an employee of the organization (Mowday, Steers, & Porter, 1979). Intention to remain refers to "the extent to which they [employees] anticipated leaving their firms" (Higgins & Thomas, 2001, p. 231).

Method

From the literature review, the research model for this study was proposed as shown in Figure 1. Due to the lack of empirical research on the relationship between CoP and socialization outcomes, three CoP variables, i.e., participation, characteristics of CoP, and degree of participation were selected based on the literature review.
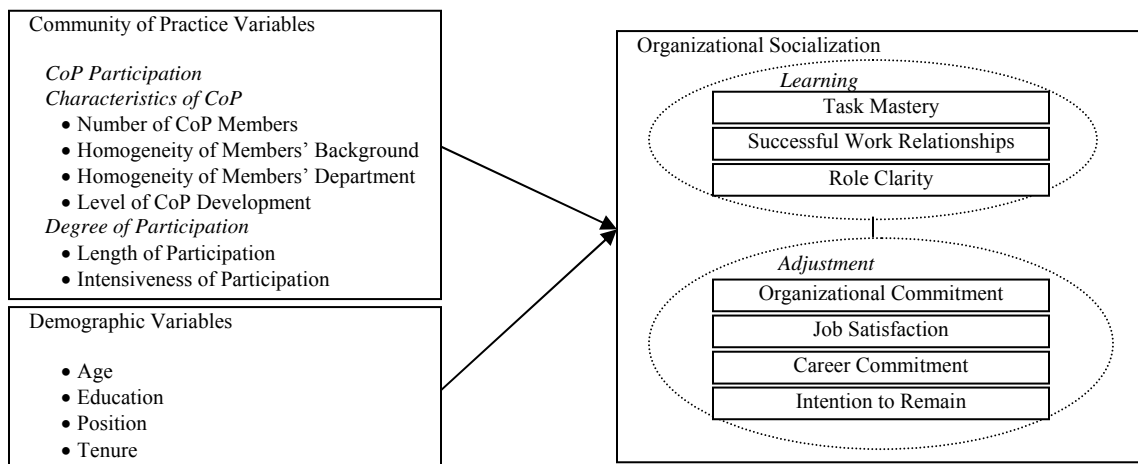

Figure 1. Research model.

Participants of this study were employees who have worked for a large IT service company in Korea for no more than five years. Employees who are in the early stages of their careers are more sensitive to socialization interventions (Feldman, 1988). In the target company, the first five years in the company are regarded as critical to one's career development. Though almost all employees are promoted after the first three years, their seniors and co-workers call them "senior assistant managers" and begin to respect their experience and empower them to control their work when the first five years in the organization have elapsed. The company was selected for this study because it was found that the Korean IT industry had more interest in facilitating employees' CoP activities (Joo & Kim, 2004) and that the company was one of the early adopters of CoP in the field. In the spring of 2005, when the study began, there were 38 CoPs active and 1200 CoPs participants recognized and supported by the KM team of the company.

Among 450 individuals who were given a questionnaire via e-mail or in-person, the primary research collected 213 valid responses. The average age was 29.08 and the average job experience was 40.87 months. One third of the respondents were female (33.8%). Four fifths of the respondents had B.A. degrees (82.2%) and the rest had post-baccalaureate education. One third of the respondents were staff members (36.6%) and the remainder were assistant managers. The majority worked in technical departments (66.7%), service area (7%), finance and purchase (7%), and R&D (6.1%).

A survey questionnaire was developed based on the existing measures of socialization outcomes, and the literature review on CoP. It was composed of three sections followed by a demographic section. The first part asked whether the respondent had ever participated in CoP or not. In the second part, the questions asked what were the characteristics of the CoPs in which the respondents participated and how enthusiastically they participated. The sample questions are: "How many members does the CoP have?", "To what extent do the CoP members have similar backgrounds?", and "Do the CoP members work in the same team or department?" The level of CoP development was measured with seven questions which were generated based on the characteristics of each stage of community development (Wenger et al., 2002). The responses were categorized into one variable with high reliability (α=.849 when the respondents answered about one CoP in which they participated; α=.862 when respondents answered about two CoPs). The degree of participation includes length and the intensiveness of CoP participation. The intensiveness of CoP participation was calculated based on attendance at formal meetings, frequency of regular contact with other members, and the number of contacting members. Third, instruments for measuring organizational socialization outcomes were used in assessing learning and adjustment. Learning and adjustment were measured using selected questions of existing instruments: Learning was assessed by 15 questions on task mastery (Chao et al., 1994), successful work relationships (Chao et al., 1994), and role clarity (Rizzo, House, & Lirtzman, 1970); Adjustment was assessed by 17 questions on organizational commitment (Mowday et al., 1979), job satisfaction (Brayfield & Rothe, 1951), career commitment (Blau, 1985), and intention to remain (Higgins & Thomas, 2001). After factor analyses the questions on learning were categorized into three domains: role comprehension (α=.843), job mastery (α=.660), and sense of belonging to organization (α=.776). Adjustment was categorized into organizational commitment (α= .881), job satisfaction (α= .791), and intention to remain (α= .671).

Results

Among 213 valid responses, 100 people answered that they have experience participating in CoP. Table 1 shows the descriptive statistics.

Table 1. *Descriptive Statistics of CoP Participation*

	Mean	Standard Deviation	Min	Max
Number of CoP participated	1.71	1.175	1	8
Length of CoP participation (month)	27.83	18.09	1	96
Number of CoP members	25.42	16.42	6	85
Homogeneity of members' background*	3.03	1.19	1	5
Homogeneity of members' department*	2.81	1.42	1	5
Level of CoP development**	4.04	0.85	2	5.79
Intensiveness of CoP participation*	2.50	1.01	.67	4.50

* measured on 5-point scale
** measured on 7-point scale

Table 2. *Intercorrelations Between Variables*

n=213	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Dependant Variables																			
1.Role Comprehension	5.11	.72																	
2.Job Mastery	4.39	.99	.479**																
3.Sense of Belonging to Organization	4.95	.77	.630**	3.65**															
4.Organizational Commitment	4.41	.90	.471**	.000	.429**														
5.Job Satisfaction	4.58	.79	.534**	.213**	.429**	.616**													
6.Intention to Remain	4.36	.101	.159*	.008	.181**	.584**	.479**												
CoP Variables																			
7.CoP Participation	.47	.50	.170*	.190**	.136*	.041	.047	.083											
8.Number of CoP Members (people)	25.42	16.42	-.244*	-.044	-.096	-.131	-.186	-.112	a										
9.Homogeneity of Background	3.00	1.22	.110	.014	-.041	.011	-.103	-.146	a	-.322**									
10. Homogeneity of Department	2.79	1.44	.98	-.041	.154	.020	-.028	-.046	a	-.542**	.310**								
11. Level of CoP Development	4.04	.85	.195	.058	.300**	.168	.054	.129	a	.107	.094	.072							
12. Length of Participation (month)	13.07	18.62	.124	.190**	.115	.041	.068	.065	.748**	.007	.091	.073	-.072						
13. Intensiveness of Participation	2.46	.98	.347**	.133	.354**	.339**	.324**	.265**	a	-.351**	.188	.460**	.375**	.168					
Demographic Variables																			
14. Sex (0=male, 1=female)	.34	.47	-.036	.097	-.086	-.123	-.126	-.110	-.056	-.078	.303**	.116	-.019	-.056	.018				
15. Age (year)	29.08	2.11	.057	.084	.044	-.054	.029	-.080	.079	.026	-.201*	-.057	-.055	.154*	-.117	-.638**			
16. Education (B.A.=0, B.A.+=1)	.18	.384	-.002	-.066	.012	-.060	.060	-.036	.028	.055	-.042	-.016	-.105	.064	-.162	-.074	.279**		
17. Position (Staff=0, Assistant Manager=1)	.63	.483	.104	.215**	-.020	-.220**	-.031	-.078	.285**	-.058	-.050	-.029	-.094	.333**	-.072	.008	.378**	.125	
18. Tenure (month)	40.87	12.85	.100	.331**	-.079	-.331**	-.105	-.231**	.265**	-.085	.182	.011	-.027	.332**	-.022	.048	.377**	-.021	.719**

*p<.05; **p<.01.

a. Not computed because no response received from non-participants of CoP

To answer research question 1, correlation analysis and hierarchical regression analysis were conducted. As shown in Table 2, participation in CoP had low positive correlation with *job mastery* (r=.190, p<.01), *role comprehension* (r=.170, p<.05), and *sense of belonging to organization* (r=.136, p<.05). In the hierarchical regression analysis, demographic variables were statistically controlled to identify the influence participation in CoP has on learning and adjustment. Statistical hypotheses were tested at the .10 level of significance because there was low probability of discovering a true relationship due to the small sample size of this study. As shown in Table 3, participation in CoP is significantly related to *intention to remain* (β=.283, p<.05), *sense of belonging to organization* (β=.261, p<.05), *organizational commitment* (β=.258, p<.05), *job mastery* (β=.230, p<.10), and *role comprehension* (β=.218, p<.05). The respondents' intentions to remain in the organization were positively related to their positions (β=.420, p<.05). However, when we included CoP participation variable in model 2, the relationship between these two variables was weaker (β=.360, p<.10). Similarly, the relationship between tenure and job mastery slightly decreased when employees' participation in CoP was considered (model 1: β=.028, p<.001; model 2: β=.026, p<.01). These findings will be discussed in the next section.

Table 3. *Summary of Hierarchical Regression Analysis for Variables CoP Participation*

n=213	Role Comprehension		Job Mastery		Sense of Belonging to Organization		Organizational Commitment		Job Satisfaction		Intention to Remain	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Demographic Variables												
Age	.007	.010	-.014	-.010	.032	.035	.048	.051	.023	.024	.003***	.007
Education	-.028	-.035	-.121	-.128	-.047	-.055	-.246	-.254	.063	.059	-.186	-.195
Position	.100	.054	-.055	-.103	.101	.046	.079	.025	.114	.089	.420*	.360†
Tenure	.002	.001	.028***	.026**	-.009	-.011†	-.028***	-.030***	-.011†	-.012†	-.030***	-.031***
CoP Participation		.218*		.230†		.261*		.258*		.118		.283*
R²	.013	.033	.114	.126	.015	.041	.125	.144	.020	.025	.074	.092
ΔR2		.021		.012		.026		.019		.005		.018
F	.660	1.433	6.679	5.972	.774	1.749	7.499	6.968	1.069	1.073	4.163	4.197

†p<.10; *p<.05; **p<.01; ***p<.001.

Research question 2 sought to identify the impact of CoP characteristics on learning and adjustment. Table 4 and Table 5 present the results of hierarchical regression analysis on CoP participants (n=100). In model 2, number of CoP members had very low negative relationships with *intention to remain* (β=-.016, p<.05), *job satisfaction* (β=-.015, p<.01), *organizational commitment* (β=-.012, p<.10), and *role comprehension* (β=-.011, p<.05). After including degree of participation in the model, the magnitude of the relationships decreased in model 3 (*job satisfaction,* β=-.011, p<.10; *role comprehension,* β=-.008, p<.10). In addition, level of CoP development was significantly related to *sense of belonging to organization* (β=.282, p<.05), *intention to remain* (β=.218, p<.10),

Table 4. *Regression Analysis of CoP Characteristics and Level of Participation: Learning*

n=100	Role Comprehension			Job Mastery			Sense of Belonging to Organization		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Demographic Variables									
Age	.026	.050	.056	.017	.007	.012	.063	.067	.071
Education	-.380*	-.361*	-.316†	-.234	-.191	-.154	-.325	-.258	-.225
Position	.426†	.563*	-.566*	-.174	-.236	-.236	.293	.352	.350
Tenure	-.018†	-.028*	-.027*	.027†	.030†	.029†	-.022†	-.023†	-.025†
COP Characteristics									
Number of CoP Members		-.011*	-.008†		-.005	-.003		-.004	-.002
Background Homogeneity		.076	.082		-.045	-.041		-.027	-.023
Department Homogeneity		-.041	-.082		-.052	-.089		.059	.013
Level of CoP Development		.171*	.088		.075	.007		.282*	.201*
Degree of Participation									
Length of Participation			-.001			.001			.002
Intensiveness of Participation			.191*			.163			.199*
R²	.061	.188	.239	.072	.084	.104	.046	.166	.212
ΔR2		.127	.052		.011	.020		.120	.045
F	1.537	2.625*	2.799*	1.850	1.038	1.033	1.156	2.268*	2.388*

†p<.10; *p<.05; **p<.01; ***p<.001.

Table 5. *Regression Analysis of CoP Characteristics and Level of Participation: Adjustment*

n=100	Organizational Commitment			Job Satisfaction			Intention to Remain		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Demographic Variables									
Age	$.095^{†}$	$.120^{*}$	$.126^{*}$	.065	.060	.068	.083	.074	.081
Education	-.326	-.302	-.238	$-.425^{†}$	-.354	-.281	$-.525^{†}$	-.430	-.366
Position	.204	.352	.346	$.667^{*}$	$.602^{†}$	$.601^{*}$	$.878^{*}$	$.816^{*}$	$.813^{*}$
Tenure	$-.040^{*}$	$-.051^{**}$	$-.054^{**}$	$-.029^{*}$	$-.028^{†}$	$-.029^{*}$	$-.053^{**}$	$-.050^{**}$	$-.053^{**}$
COP Characteristics									
Number of CoP Members		$-.012^{†}$	-.008		$-.015^{**}$	$-.011^{†}$		$-.016^{*}$	-.012
Background Homogeneity		.087	.091		-.041	-.034		-.057	-.052
Department Homogeneity		-.077	$-.154^{*}$		-.093	$-.169^{**}$		-.108	$-.179^{*}$
Level of CoP Development		$.201^{†}$	.077		.109	-.029		$.218^{†}$	.096
Degree of Participation									
Length of Participation			.005			.002			.003
Intensiveness of Participation			$.312^{**}$			$.333^{**}$			$.302^{*}$
R^2	.125	.202	.299	.075	.143	.256	.108	.169	.233
$\Delta R2$		.077	.097		.068	.113		.062	.064
F	3.384^{*}	2.878^{**}	3.793^{***}	1.920	1.892	3.062^{**}	2.868^{*}	2.318^{*}	2.705^{**}

$^{†}p<.10; {}^{*}p<.05; {}^{**}p<.01; {}^{***}p<.001.$

organizational commitment (β=.201, p<.10), and *role comprehension* (β=.171, p<.05) in model 2. In model 3, the relationships lost the statistical significance or decreased (sense of belonging to organization, β=.201, p<.05). Homogeneity of members' department was significantly related only with adjustment variables in model 3 (*intention to remain*, β=-.179, p<.05; *job satisfaction*, β=-.169, p<.01; *organizational commitment*, β=-.154, p<.05).

Research question 3 sought to identify the influence that degree of participation has on learning and adjustment. Model 3 demonstrates that there are positive relationships between intensiveness of participation and learning and adjustment (*job satisfaction*, β=.333, p<.01; *organizational commitment*, β=.312, p<.01; *intention to remain*, β=.302, p<.05; *sense of belonging to organization*, β=.199, p<.05; *role comprehension*, β=.291, p<.05). A significant relationship between intensiveness of participation and job mastery was not found.

Limitations of this study are related to samples and research method. First, small sample size (N=213 in the case of research question 1, and N=100 in the case of research questions 2 and 3) may cause low statistical power. As the low response rate, which caused the small sample size, can ruin the external validity of this study, the primary researcher compared respondents and non-respondents on one characteristic. Average tenure of non-respondents (42.70) was longer than that of respondents (40.87) by 2 months. Second, the findings of this study have limited generalizability because of the purposive sampling. To reduce the effect of prior work experience, the researchers purposely selected a group of people who have some common characteristics, i.e., participants of this study are young employees of a large IT company who have little prior full-time work experience after they completed the B.A. or extended education. Because of this distinctiveness, the results may not be generalized to employees of small or medium sized companies, managers, or workers in other industries. Also, the CoPs in which the respondents participate are recognized and supported. CoPs that are unrecognized and informal were not included in this study. Third, this study did not include variables that may affect the learning and adjustment of employees, such as prior knowledge and skills, expectations about the job, supportiveness of employees' teams and team managers, and mentoring. The research model needs to include these variables to answer research questions more accurately. Fourth, limitations of the self-reporting method can be supplemented by assessing peers and supervisors. Longitudinal research is an alternative suggested by organizational socialization literature.

Discussion

The findings of this study support the literature on CoP which suggests the relationship between participation in CoP and CoP members' learning. The results indicate that participation in CoP facilitates acquiring knowledge and skills but also promotes affective change. However, the findings raise some issues concerning taking best advantage of CoP and facilitating CoP effectively.

First, the results show that participation in CoP is more strongly related to adjustment than to learning when characteristics of CoP and degree of participation are controlled. This means that CoPs need to be dealt with not only from an employee development perspective, but also from the perspective of the whole HR system, including career development, organization development, staffing, and compensation and benefits. For example, there is a significant relationship between position and intention to remain, which can be thought of as common sense, i.e., the higher one's position, the greater their intention is to remain, all things being equal. As we consider the impact of

CoP by including CoP variables in regression models, we see the relationship between position and the intention to remain decreases. This means that CoP participants have more intention to remain than their colleagues in the same position who do not participate in CoPs. CoP participants may find value from CoP activities, such as successful relationships with others in the organization, which affect intention to remain. In addition, we also found that CoPs affect the relationship between tenure and job mastery. When we consider employees' CoP participation, the portion of job mastery which can be explained by tenure slightly decreases (see Table 2 and Table 4). This implies that CoPs help employees master their job, though no significant relationship was found between CoP variables and job mastery. Overall, further studies may be enhanced by building a model which reflects a systems approach.

Second, quality of participation matters when it comes to outcomes of CoP participation. In relation to the relationship between the degree of participation and learning, intensiveness of participation is significantly related to all dependant variables except job mastery. Again, job satisfaction had no significant relationship with CoP participation in the first regression analysis results. However, CoP characteristics and intensiveness of participation explained job satisfaction in the final regression model. Therefore, it can be concluded that just the fact that whether an individual participates in CoP or not does not guarantee that he or she learns through the CoP. The frequency of contact with other members and the nature of the relationships one has with others affect individual learning gains. This result suggests that organizations need to provide and encourage activities and events which foster relationships among CoP members when they support CoP.

Third, there are other variables that need to be considered which may identify the learning in CoP. As stated above, job mastery was significantly related to CoP participation in research question 1. However, the relationship cannot be explained by CoP characteristics or degree of participation. Future research is needed to better identify the impact of CoP on employee's learning by including other variables in the model, such as mediators and moderators which affect the relationship. We recommend that personal characteristics such as self-efficacy, and other HRD interventions need to be considered.

Contribution to HRD

This study attempted to evaluate the impact of CoP on employee's learning and adjustment from an organizational socialization perspective. Although this study was limited to employees in a Korean IT company who are early in their careers, the findings of this study raise implications for HRD practice and research.

First, HRD practitioners need to recognize that learning occurs in CoP and to present the benefits in order to gain resources for facilitating those learning phenomena. This means HRD practitioners can expand their area by not losing their focus on learning and performance. Supporting CoP is still a role of only the KM department in many Korean companies. Knowledge is not the only resource which can be measured to prove its value. HRD practitioners have accountability to identify all learning phenomena in organizations and to promote learning. In this sense, the role of HRD practitioners is to show the rationale for investing in CoP.

Second, researchers have discussed different types of workplace learning, including mentoring, networking, and learning through relationships with others, in addition to classroom training programs. However, previous research on CoP is focused either on the process of learning or on the benefits in terms of quantity of knowledge. Future study needs to focus on learning outcomes of CoP and to address the system in which learning occurs. Certainly, knowledge may play an important role in the system. Researchers may gain insight concerning how to build a bridge between HRD practices and KM from this study.

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