

Communities of Practice and Teacher Development – lessons learnt from an educational innovation in Pakistan

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Abstract: Communities of Practice (CoP) is a novel idea that highlights the importance of informal learning and working groups in an organization. Organizations need to nurture informal spaces of learning so as to enhance overall organizational success. This article builds on this idea and applies it to educational context of Pakistan, particularly towards the issue of teacher training. The paper presents the example of an educational improvement programme in KPK province of Pakistan titled ‘Primary Education Project – Improvement of the Learning Environment (PEP-ILE)’. It is highlighted that PEP-ILE created cluster based training model around subject areas. Such configuration allowed for the development of CoPs among school teachers. The result was enhancement of overall performance and better students’ achievement.

Keywords: educational innovation, communities of practice, teacher education

Introduction

The present organizational world is characterized by change and uncertainty. In order to survive, compete and succeed organizations have been in continuous search of plausible solutions for organizational challenges; educational organizations are no exception. It is widely acknowledged that ‘knowledge production [creation and management] through problem solving, learning and leadership’ helps organizations address the organizational challenges (Seddon & Cairns, 2002, p. 736). From time to time several organizational structures have been proposed for better knowledge management like work groups, product focused business units and work teams of different kinds. Community of practice (CoP) has been introduced as a new organizational form, which according to its proponents ‘promises to complement existing structures and radically galvanize knowledge sharing, learning, and change’ (Wenger & Snyder, 2000, p. 139).

The idea of community of practice is the articulation of the fact that a great deal

of the organizational learning occurs through the informal interaction of the individuals in a social context. Community of practice is an informal learning context for individuals with similar interests, together in a work environment or at a distance. Such communities are formed around some practical interests and exist along with formal organizational structure (Wenger & Snyder, 2000). Although communities of practice sometimes alleged as romanticised, many scholars have contributed towards the empirical worth of the concept. Gronn (2003, p. 30) while highlighting the limitations of the idea of communities of practice in relation to leadership, acknowledges that the idea has 'strong discursive appeal among managers and workplace reformers.

The discussion related to communities of practice often touches upon the importance of organizational learning and the role of leadership in this context. It is argued that organizational work units are formed to fulfill production tasks, while communities attend to the learning part of an organization. In relation to leadership it is suggested that distributed form of leadership provides the most relevant explanation of the organizational division of labour and the nature of the dynamics of communities of practice (Gronn, 2003; Wenger, 2000). These assertions are quite useful in the context of educational organizations where there is space for building communities of practice and dispersion of leadership.

The above discussion highlights the appeal of the idea of community of practice and its relevance to the organizational learning and change. This article begins by looking more closely to the idea of communities of practice, its main features and value for organizational learning. The role of leadership in community of practice is also touched upon. In the later part of the article I have made in effort to explore the applicability of this idea in the context of teacher training in Pakistan. It is debated whether the idea of communities of practice offers some useful solutions for educational trainings in Pakistan through the formation of cluster based communities of practice of teachers. Such a strategy can not only help government of Pakistan to offer quality teacher training with minimum resources, but also enhance teachers' learning through their participation in training clusters and communities of practice. Borrowing from McGregor (2003) the special location of community was been searched in clusters. It is explained that how did one of the teacher development project in Khyber Pakhtun Khwa (KPK, former North West Frontier Province of Pakistan (NWFP)) titled "Primary Education Project –

Improvement of the Learning Environment (PEP-ILE) quite successfully implemented the model of cluster based training (a kind of community of practice). Learning from the examples of the PEP-ILE project, it has been explored that how far the idea of formation of communities of practice through cluster based training can enhance teachers' pedagogy and professional development (so as to improve students' achievement) in Pakistan. The limitation of the idea of communities of practice has also been considered to remain mindful of not stretching the applicability of the idea too much.

The idea of Community of Practice (CoP)

The word 'community' like many other terminologies used in social sciences has been used with widely diversified meanings. However, the word generally refers to some informal collection of individuals around common interests. Etienne Wenger with other colleagues have introduced the idea of community into the organizational vocabulary by suggesting that individuals in organizations form informal groupings around some common work practices, these groupings are referred to as 'communities of practice'. Wenger (2000, p. 139) defines community of practice as a 'group of people informally bound together by shared expertise and passion for a joint enterprise'.

Wenger (1998) considers these communities as age old phenomenon which have been prevalent in all organizations. What is unique now is the importance given to knowledge in the present day organizations in both formal and informal contexts. Hence, organizations need to be explicit about such organizational structures as communities of practice which play a vital role in creation and management of knowledge in any organization. Wenger calls them the 'latest wave in an ongoing evolution of organizational structures'; the former three waves being: functional division, multi-divisional business units and project-based teams (Wenger, 1998, p. 4).

Communities of practice as unique and informal organizational form exist along with formal organizational structures and hierarchies. In fact they support the existing organizational structure through 'knowledge sharing, learning and change' (Wenger & Snyder, 2000, p. 139). For example a group of educational researchers may meet every Wednesday at lunch time to share their experiences and take colleagues' opinion on intriguing problems in their research areas. Such gatherings are informal and

unstructured, but highly instrumental in developing knowledge beyond their immediate concerns. These meetings are voluntary in nature and are sustained due to the value that members see in such participation (Wenger, McDermott, & Snyder, 2002).

Wenger and Snyder (2000) identified following general features of communities of practice:

- They are formed for variety of reasons which can be internal or external to organization but which have direct bearing on individual members' professional experiences.
- They can exist within an organization or across organizations. The latest advancement in the technology has made it possible to participate now even in communities which are physically distant.
- They can have small as well as very large groupings but they certainly have a core group of people who lead the group socially and intellectually. However, larger sizes may hamper free flow of information and focused discussions. In such instances the particular community of practice may form sub communities.
- They differ from management teams which are formed by managers. Communities of practice are self-growing entities with informal agendas and interactions; their membership is voluntary but requires formal or informal approval of existing members.
- CoPs renew and reinforce themselves through the creation of knowledge and the collection of benefits that accrue due to the knowledge these communities generate.

The major difference between communities of practice and other organizational structures is that different organizational structures are formally formed to achieve organizational task and their proper management. On the contrary, communities are the structures for organizational knowledge management (Wenger, 1998).

Communities of practice and organizational learning

Fiol and Lyles (1985, p. 803) define organizational learning as 'the process of improving actions through better knowledge and understanding'. Argyris and Schon (1996) see organizational learning as a continuous process whereby individual's and organization's theory-in-use interact for alignment and subsequently resulting in learning. The learning that results in improving existing organizational procedures is called single-

loop learning, while learning that results in fundamental shifts in organizational way of doing things is called double-loop learning. Similarly, Robinson (2002, p. 808) sees organizational learning as 'development of new solutions to organizational problem'.

Knowledge is usually considered as the product of organizational learning. Wenger and Snyder (2000, p. 140) consider knowledge as the primary output of a community of practice, which is utilised to solve organizational problems (Robinson, 2002). In their 'multimember ship learning cycle' (Wenger et al., 2002, p. 19) they highlighted the centrality of learning in the cycle. The formal members of working teams apply their existing knowledge to solve problems, when they encounter new problems they innovate and experience new learning. In addition as a member of a community of practice the same members share their experiences with the community they belong to. In their community they disseminate their own knowledge, take further suggestions to improve and debate multiple solutions, which ultimately result in the improvement of the 'practice'. This learning loop continues to enhance organizational knowledge through the members' participation in communities of practice (Ibid, pp. 18-19).

The learning does not stop at the micro organizational level. In fact the workplace is embedded in a multi-layer context: micro, meso and macro (Frenkel, 2003). Not only that organizations have to learn to manage themselves as learning systems, they also have to learn to participate in broader learning systems situated in macro environment, for example multi-national consortium of companies belonging to a particular industry (Wenger, 2000, p. 244).

It is important to highlight that unlike the cognitive perspectives of knowledge, the scholars of communities of practice highlight the 'situated' nature of knowledge, which is created through participants' interaction and embedded in a particular social, cultural and historical context (Lave, 1991; McGregor, 2003).

Communities of practice and social learning system

Wenger (2000) suggests that the success of any organization depends on its ability to design itself as a 'learning system'. Such a learning system comprises of three elements: communities of practice, boundary processes among communities and identities as shaped by the participation in these systems.

Knowing in a community involves two things; first, 'competence that community has established over time'; second, 'ongoing experience' of the community that challenges established knowledge. A different experience usually challenges the existing competence and become the stimulus for further learning (Wenger, 2000, p. 226).

Boundary processes as social learning system

Wenger et al. (2002, p. 57) conceptualise a community of practice as a bounded system like a sphere, the inner part of which represents core group of members and external part represent periphery. Wenger (2000) argues that the notion of community implicitly assumes a boundary, which is important in connecting different communities and enhancing cross-community learning. However, these boundaries are quite fluid. Learning in boundaries is different than learning in community. Community has shared and similar learning exposure, while learning at boundaries is across competence areas and diverse fields (Ibid, p. 233). The members who reside at the boundaries of multiple communities of practice help in cross community learning and bridge between them. However, these members have to have enough legitimacy among different communities so that their peripheral participation is considered legitimate.

Identity formation as social learning system

Wenger (2000) considers knowing as an act of belonging, which suggest that our knowledge is dependent upon our identity. We know those things better that we identify with. Lave (1991, pp. 64, 72) argues that learning is a social phenomenon, which is acquired through the experience of becoming legitimate peripheral participant in a community of practice. With the gradual acquisition of knowledge the person changes his/her identification from legitimate peripheral participant to expert core member or master of craft. Hence, becoming knowledgeable is the construction of new identities throughout the journey towards the mastery of practice. Taking example of apprenticeship, she suggests that the classroom teaching learning processes are not suitable to the situated nature of learning. The learning occurs through full participation in an ongoing activity which lacks in classroom situation (Ibid, p. 77).

Leadership in community of practice

Discussing about the role of leadership in communities of practice, Gronn (2003) suggests that popular leadership conceptualisation tend to see leadership as personality traits of individual leaders. This view, he shows, does not coincide with the reality of division of labour in organizations. Studies of communities of practice on the other hand match closer to the organizational reality in the sense that they reflect the true dynamics of division of labour in organizations. Such studies highlight the importance of distributed leadership and refer to members as ‘colleagues’ rather than labelling them as leader-follower. The distributed view of leadership acknowledges that leadership is an influence relation and the identity of leader in a group shifts.

McGregor (2003, p. 123) in her study of schools noted that leadership in community of practice ‘aligns’ the interests of community with organizational processes and tasks. In that sense leadership plays an important ‘alignment’ role in a community. This function does not depend on a single person; rather different people at different times influence the outcome. In that sense the true knowledge management believes that instead of a formal knowledge manager, community itself manages knowledge in an organization. Therefore the work of the leader should be that of a facilitator of communities to manage organizational knowledge (Wenger, 1998, p. 18).

Wenger and Snyder (2000) used the analogy of gardener for the manager and referred to plantation as a community. The gardener does not grow flowers but provides facilitating environment for plants to grow by watering, providing soil and weeding. In the same way managers need to i) identify communities of practice that enhance organization’s productivity; ii) provide support and enabling environment for communities to form and grow; and iii) assess their worth through non-traditional means (but not formal appraisal).

Having discussed the characteristics and usefulness of CoPs along with the role of leadership in such formulations, I would like to use this conceptual lens to look at a teacher training project (PEP-ILE) implemented in KPK during 1990s.

Formation of Communities of Practice through cluster based teacher training programmes – lessons from PEP-ILE

PEP-ILE has historically evolved as an educational improvement project in the KPK province (former NWFP province) of Pakistan. The funding partners of the project included GTZ (German development agency), Department for International Development (DFID) and NED (Netherlands development agency). The roots of the project go back to the year 1985 when the first primary education improvement project was launched, which subsequently shaped PEP-ILE. Since then the project continued in different forms, changing its names and educational focuses. The project was named PEP-ILE in 1996 with the objectives to increase enrolment, improve learning achievement of students, develop teachers and encourage higher parents' participation in schools. The project tried to achieve these objectives through preparing teaching materials (textbooks, workbooks, teacher guides); training teachers in the use of material (accompanied by training manuals); and developing capacity of educational managers to monitor the progress.

The area of PEP-ILE's activities that particularly relates to the discussion of this article is its teacher training model. In order to train approximately twenty-two thousand teachers of KPK, the project adopted a cluster-based training model. The training was conducted through a cascade style in three steps. In the first step the core project team developed master trainers, who trained circle trainers in the second step. In the end, the circle trainers trained the teachers of different schools in a cluster (for the model of training see Appendix-A). Each cluster was called a Local Training Resource Centre (LTRC) and was comprised of 25-35 schools, three to four LTRCs form a circle which forms a block. Under the PEP-ILE project, KPK was divided into four training blocks (see Appendix-B).

It is particularly interesting to note the training process in LTRCs (clusters). Each cluster invited teachers from 25-35 schools (usually 1-2 teachers per school) for training at a central location in the cluster, the training sessions were followed by continuous monitoring by educational managers in the respective schools. These training clusters can also be seen as communities of practice. McGregor (2003) in her schools' study showed that although the subject departments refer to organizational structure, they can also be seen as spatial locations for communities of practice. The clusters in the PEP-ILE example also represent locations for teachers to engage in the communities around their

pedagogical practices or subject areas. It is important to observe that cluster based training provided a facilitative environment where different teachers form informal ties to help in each other's continuous professional development even when they leave the training sites (cluster LTRC). The training was provided in subject areas of maths, languages, science, general pedagogy and parent relations. These subject areas also provided opportunities to form communities around them. The boundary relations around subject areas bridge between different communities and also initiate cross boundary learning (Wenger, 2000). In light of the learning model suggested by Wenger et al. (2002) teachers encountered several educational problems in their daily work practices and tried to solve them innovatively. The educational experiences were shared when teachers periodically return to their clusters. They shared their experiences and collected alternative solution models. This sharing of practice built their capability to deal with uncertainties of daily pedagogical tasks back at work. As a result of these cluster based training supported by organizational structures there had been steady progress in students' achievement across subject areas, classes and gender (PEP-ILE & PITE, 2003).

McGregor (2003, p. 115) suggests that teachers develop professional communities when they involve in 'concrete talk about teaching, and planning, researching and evaluating together'. The learning best occurs when teachers involve in doing things together, for example joint planning of lessons and seeking colleagues' feedback on the teaching practices, which had been a unique feature of cluster based training.

Lessons for the teacher training initiatives in Pakistan from PEP-ILE

It has been shown in the previous section that the cluster based training model provided opportunities for teachers to form the communities of practices around different subject areas, which in turn impacted positively on students' achievement. The training was continuously supported by training materials and administrative assistance. In light of the PEP-ILE experience I have to explore in the following lines whether this training model suits Pakistani context and holds any virtue for further replicability.

Teachers' low content knowledge and pedagogical deficiencies have been well reported areas in educational context of Pakistan (Andrabi et al., 2008; Warwick &

Reimers, 1995). Given the low adult literacy rate of Pakistan (around 50%) the need for raising literacy levels has been a major responsibility for the education sector of Pakistan. However, this push is not supported equally with required resources; the budget allocation for education has roughly been around 2% for last several years (Baqir, 1998). In addition to quantity, the quality of teachers' pedagogy is also questionable (Warwick & Reimers, 1995). In order to address these three major problems, the cluster based training which also encourages growth of communities of practices around subject areas, appears as a plausible alternative to the existing need of teacher training in Pakistan. The experience of PEP-ILE convincingly showed that cluster based training can deliver positive results at mass level with low resource involvement. Such a model of training is also enhanced by the communities of practices that teachers form. Wenger (1998) argues that communities should not be taken into formal organizational structure; rather an attempt should be made to facilitate the growth of communities with their own pace. The formal cluster model is further enhanced by the informal communities formed as a result of teachers' interaction in clusters. The lessons learnt from PEP-ILE project in KPK province of Pakistan can be replicated in other provinces so that the government could meet the challenging task of eradicating illiteracy by the year 2015 with minimum resource allocation (Pakistan. Ministry of Education, 2003).

Limitations of the communities of practice model

The virtues of communities of practice for the teacher training in Pakistan have been highlighted in the above sections. However, there are some challenges that need to be taken care of when applying this model. The communities of practice depend on the participation of its members but do not have any formal control over its members (Gronn, 2003). Hence, it is quite likely that in some clusters the result of training supported by different communities of practice would be positive, while others may not progress. The learning in communities of practice is also informal and greatly remains implicit; hence, it cannot be gauged easily. If management tries to use formal mechanism to measure learning through communities, it will simply run against the very nature of communities of practice. This is the management paradox that Wenger and Snyder (2000) have warned of and suggested to use innovative mechanisms to do the task rather than any formal reporting mechanisms. McGregor (2003, p. 114) also highlighted the importance of

power relations in socially and spatially constructed collaboration among teachers in communities of practice. Learning in communities is enabled and constrained by power relations (Contu & Willmott, 2003). The educational context of Pakistan is also highly charged with power relations that are not very well accounted by the theory of communities of practices. Hence, ignorance of this crucial factor may jeopardise the whole training programme.

Conclusion

Communities of practice have been highly appreciated as the organizational structures that are responsible for knowledge creation and management. McGregor (2003) has tried to see the applicability of the theory of community of practice in the educational context and concluded that subject departments (not school) can be conceived as spatial locations for the development of communities of practice around concerns of pedagogy, research and evaluation. In this article I have tried to explore the sites of teacher training clusters as locations for communities of practice using the example of PEP-ILE, an educational improvement project in KPK province of Pakistan.

In order to reach to above conclusion the first part of the article discusses the definition and features of communities of practice. This is followed by exploring the role of communities of practice in organizational learning. It has been shown that due to the uncertain and competitive environment knowledge has been recognised as the best option for the survival and success of an organization (Seddon & Cairns, 2002). The communities of practice exist along with formal organizational structures. The formal structures are vested with ensuring the task performance of organizational business while the major function of communities of practice is to manage knowledge, which is done at informal and often implicit level (but can be made explicit) (Wenger, 1998, 2000). In this connection the role of leadership should be of facilitator, to make sure that an environment which ensures the formation of communities of practice be created. Hence, the distributed leadership that sees all participants as colleagues is a better conception than a charismatic view of leadership (Gronn, 2003; McGregor, 2003).

In the last section of the article, I have tried to explain the teacher training model adopted by PEP-ILE project in KPK province of Pakistan. It is shown that the cluster

based training model not only trained teachers but also provided opportunity for the formation of communities of practice; hence the value of training is increased. In addition this model also requires less resources compared to any other mass training programme. Therefore, there is value in replicating this model in other provinces of Pakistan. However, there are certain challenges that need to be accounted for, like the informal nature of communities of practice, implicit learning and power relations. If proper care is taken for such challenges along with the provision of encouraging environment for the formation of communities of practice in clusters, the training of teachers would be of high value and will reflect positively on students' achievement, as has been shown by PEP-ILE experience. On a different scale a cluster based teacher development programme ESRA (Education Sector Reform Assistance) further strengthen the argument of the paper (see Hussain & Ali, 2010).

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