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The relationships among teacher perceptions on professional learning community, collective efficacy, gender, and school level

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Acknowledgments

Abstract

This study examined the relationships among teacher perceptions on professional learning community (PLC), school organizational culture (SOC), and school level. Participants were 382 elementary school teachers and secondary school teachers in central Taiwan. The analytical results showed a positive correlation between teacher perceived PLC and SOC,i.e., perceived PLC could predict perceived SOC. Atclan and hierarchical culture levels, the PLC dimension structural condition was strong estpredictor of perceived SOC. At market and adhocracy culture levels, however, human and social resources dimension was the best predictor. Moreover, elementary school teachers differed significantly from their secondary school counterparts in perceived PLC and SOC.

Keywords: Professional learning community, school organizational culture, school level.

Introduction

Culture is a pattern of shared basic assumptions, invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration(Schein,1987). Organizational culture which is defined as a set of norms, values, and beliefs is reflected in legends, rituals, symbols, and language (Daft, 1998). In the late 1970s and 1980s, the concept of organizational culture became popular as organizational researchers began

paying much attention to it (Deal and Kennedy, 1982; Peters & Waterman, 1982; Pettigrew, 1979). The school is not only a physical space or a formal organization but also a social and psychological environment which develops the teachers' professional competence and raises their community consciousness(Ipek, 2010). School organizational culture (SOC)influencesschool faculty'snorms, values and beliefsand contributes to teachers in professional development. A professional learning community (PLC)of teachers has been considered as an effective way to improve teacher qualities and student learning in various dimensions (Goddard, Hoy, & Hoy, 2004; Thompson, Gregg, &Niska, 2004). Several studies describe the characteristics of PLC (for example, DuFour, DuFour, &Eaker, 2008; Hord, 1997; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006) including supportive and shared leadership, shared values and vision, reflective dialogue, collective learning and application, supportive conditions, shared personal practice, and results orientation.Creation ofa professional community could contributeto several potential advantages for schools and has a good influence onschool organizational culture(Kruse & Louis, 1993; Little, 2002).Many literaturesinvestigated related issues on PLCs (e.g. DuFour, DuFour, &Eaker, 2008; Hord, 2004) and on SOC(e.g. Gregory, Harris, Armenakis, & Shook,2009; Shortell, et al.,2000),but fewresearch explored the relationships between both.

Because of the unprecedented K-12 educational reformsrecently implemented in Taiwan, PLCshave received considerable attention, especially at the elementary and secondary school levels. Traditionally, schools'normative control mechanism is based on rules, roles, and regulations rather than on value, norms, and belief structures (Kruse & Louis, 1993). Taiwanese government is encouraging schools to change organizational culture by buildingPLC which encourage teachers to engage in professional discussions, shared values and vision, reflective dialogue, and collective learningto change their traditional views. There are increasing numbers of teachers upgrade their professional competencies by attending school-based PLCs in Taiwan. This is also an important step towards the changeof SOC. The measure of SOC has been the subject of considerable interest among scholars and researchers. The central point of the Competing Values Framework (CVF), developed by Quinn and Rohrbaugh (1983), is that organizational effectiveness depends on the organization's ability to satisfy multiple performance criteria based on four value sets (Quinn, 1988; Cameron & Quinn, 1999) including clan employee focused culture, market result focused culture, adhocracy/entrepreneurial culture,and hierarchy culture. The four sets of core values illustrate the orientation of organizations towards the competing demands of a variety of ongoing activities, such as competition, obligations, priorities or short term lines. According to Cameron and Quinn(1999), organizations must be adaptable and flexiblebut at the same time they must be stable and controlled. Organizations typically strive for growth, resource acquisition and external support, but they also want to maximize their control of information and formal communication.The CVF has been widely applied to studies ofvarious organizational cultures(e.g.Ancarani, Mauro, Giammanco, 2009; Davies et al., 2007;Gerowitz, 1998; Helfrich, Li, Mohr, &Meterko, 2007;Meterko et al., 2004;Shortell et al., 2000), but few studies used CVF as a framework to investigate SOC. Thus,

the present study based on the concept of CVFmeasures a teacher's perception of SOCand examines the relationship between SOC and perceived PLC, including correlation and prediction in Taiwan context. The findings of the present study should provide valuable information in this field and enhance the understandings on PLC andSOCin different cultural context.

Methodology

Participants

Fifth-four elementaryand eleven secondary schools were randomly selected in central Taiwan to take part in the present study. 462 teachers from these schools were selected. To ensure confidentiality, each questionnaire was completed anonymously. With a response rate of 82.68%, 382 teachers returned completed questionnaires, including 73.3% elementary school teachers and 26.7% secondary school teachers.

Instruments

Perceived School Organization Culture Scale

One research instrument, theSchoolOrganizational Culture Scale(SOCS), was developed by the author based on based on the concept of Cameron and Quinn (1999) to measure SOC on four culture dimensions, namely, clan,market, adhocracy, and hierarchy. Twenty-four items in this scale were designed to measure four dimensions. The first dimension, clanculture(6 items), measured values that are internal, flexible, concern for people and customers, marketculture (6 items)measure values that are external with a need for stability and control. The third dimension, adhocracy culture (6 items), measured an external orientation with a high degree of flexibility and individuality. The four dimension, hierarchy culture (6 items), measured internal maintenance and control values. Teachers were asked to rate the items on a four-point Likertscale anchoring at 1, 2, 3, and 4 (strongly disagree, disagree, agree, strongly agree). The factor analysis made on data obtained by SOCS in the current application reveals that each item in all subscale dimensions produced factor loadings from.87 to .90. The overallinternal consistency (Cronbach's α =.94) for the scale in the current sample was good. The Cronbach'sαfor the four subscales ranged from .88 to .93, indicating good internal consistencies of the items within each subscale.

Perceived Professional Learning Community Scale

Another one research instrument, the Perceived Professional Learning Communities Scale

(PLCS) was developed by the author based on previous literatures and studies (DuFour, DuFour,

&Eaker, 2008; Hord, 1997, 2004; Kruse & Louis, 1993) to measure a teacher's perception of a PLC on three dimensions, namely,core elements, human and social resources, andstructural conditions. Fourteen items in this PLCS were designed to measure three dimensions. The first dimension, core elements (6 items) measured the teachers' reflective dialogue, shared values and vision, shared practice, collective learning and application of learning. The second dimension,

human and social resources (4 items) measured a school's physical conditions and human capacities that encourage and sustain a collegial atmosphere and collective learning. The third dimension, structural conditions (4 items) measured conditions necessary support to create an environment of internalized connection between teachers in academic work, such as time to meet and talk, physical proximity, interdependent teaching roles, and communication structures. Teachers were asked to rate the items on a four-point Likertscale anchoring at 1, 2, 3, and 4 (strongly disagree, disagree, agree, strongly agree). The factor analysis made on data obtained by PLCS in the current application reveals that each item in all subscale dimensions produced factor loadings from .84 to .98. The overall internal consistency (Cronbach's α =. 94) for the scale in the current sample was good. The Cronbach'sαfor the three subscales ranged from .92 to .87, indicating good internal consistencies of the items within each subscale.

Discussion

This study examined the relationshipbetweenteachers' perceptions on PLC and SOC and school levels. On the basis of thedata analyzed, the presentresults suggested the followingaspects of interest.First, perceived SOC and PLCwerepositive correlated. This first suggested PLC appear to play a role in teachers'reported levels of SOC. Next, this resultprovided initial evidence that the variation betweenschools in PLC may be explained by theSOC. Teacher perceived PLC washigher in the schools where SOC washigher. Conversely, where perceived PLCwas lower, teachers perceivedSOC was lower.This finding provided empirical data gained from Taiwan supported SOCand PLC mutually influence. Several Studies indicated that continuousprofessional development of teachers is regarded ascrucial in improving the quality of education

(Darling-Hammond, Chung,Alethea, Richardson, &Orphanos, 2009). Through PLC, teacherswill broaden and deepen their professional knowledge and practicum experience; changebeliefs, values, and perspectives; enhance faculty relationships(Nguyen, 2009). This might cause the change of SOC. Second, significant differences were found between elementary school teachers and secondary school teachers inperceived PLC and SOC.Thefinding revealed elementary school teachershad higher level perception about supportive and shared leadership, shared values and vision, reflective dialogue, collective learning and application, supportive conditions, shared personal practice, and results orientation in their schools. Generally, secondary school teachers in Taiwan have more teaching loadings and feel unavailable to attend PLC. This might be the reason, that secondary school teachers perceived lower level in perceived PLC. Moreover, organization culture of the elementary school is different from that of secondary school in Taiwan. Organizational culture is defined as a set of norms, values, and beliefs is reflected in legends, rituals, symbols, and language (Daft, 1998). Indeed, secondary school teachers encounter with pressure to prepare their students to pass entrance examine in Taiwan. Almost all of secondary school teachers pay much attention on how to enhance their students' academic achievements. Higher percentage of passing entrance examination for students is regarded as an institution of mission. This reflected in teachers' norms, values, and beliefs and also reflected in

school legends, rituals, symbols, and language. In contrast, elementaryschool teachers have more flexibility and autonomy in the curriculum design and instruction. This might be the reason, a significant difference between elementary school teachers and secondary school teachers inperceived SOC.

Third, teachers' perception of SOC could be predicted significantly from PLC. At clan, hierarchical culture levels, onePLC dimension, structural condition, was the best predictor of perceived SOC.Based on Cameron and Quinn (1999) definition, clancultureemphasizes values that are internal, flexible, concern for people and customers; andhierarchy culture stresses internal maintenance and control values. Although structural condition is an important factor for internalized connection and control, another two PLC dimensions, core element and human and social resources, also had significant effects on these culture levels. In contrast, at two culture levels, adhocracy, market,one PLC dimension, human and social resources, was the strongest predictor of perceived SOC.Based on Cameron and Quinn (1999) definition,adhocracy cultureemphasizes an external orientation with a high degree of flexibility and individuality; and marketculturestressvalues that are external with a need for stability and control. Human and social resources refer to a school's physical conditions and human capacities that encourage and sustain a collegial atmosphere and collective learning. It has much influence on external orientation, stability, and control. However, another two PLC dimensions, core element and structural condition also have significant effects on it. This result reconfirmed that PLC played an important factor to affect SOC.

Conclusion

Based on literature review, there is fewresearch explored the relationships between PLC and SOC. Moreover, the CVF has been widely applied to studies ofvarious organizational cultures but few studies used CVF as a framework to investigate SOC. Thus, the present study based on the concept of CVFmeasures a teacher's perception of SOC and examines the relationship between SOC and perceived PLC in Taiwan context.The results of present study indicated a positive correlation was found between SOC dimensions and PLC and PLC could predict SOC. The present study not only provided empirical data gained from Taiwanbut also showed the important role of building a PLC in changingSOC. SOCas guiding operational principles have influences on individual andgroup patterns of behavior and thinking, which may eventually lead to necessaryinterventions to positively change the school environment and qualityof education.Therefore, this present study suggests school principals should take the lead in creating a trusting atmosphere among teachers and restructuring schools as PLCs to provide support for teachers' collective learning and application, all of which will finally contribute to the improvement of school environmentand change of school culture.

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