

Full Length Research Paper

The empowering leadership and teachers' innovative behavior: The mediating role of innovation climate

Mesut Sagnak

Faculty of Education, Department of Educational Sciences, Nigde University, Nigde, Turkey.
E-mail: mesutsagnak@hotmail.com.

Accepted 17 October, 2011

This study aimed to investigate the relationship among empowering leadership, teachers' innovative behavior and innovative climate in elementary schools. The participants consisted of 710 teachers and 55 principals randomly selected from 55 elementary schools in the center of Nigde and its districts. Pearson correlation coefficient and regression analysis were used for the data analysis. Results showed that principals' leadership empowerment behavior was a significant predictor of teachers' innovative behavior and innovative climate. It was determined that there was a significant relationship between innovative climate and teachers' innovative behavior. Innovative climate was found to partially mediate the relationship between principals' leadership empowerment behavior and teachers' innovative behavior.

Key words: Leadership empowerment behavior, innovative behavior, innovative climate, elementary schools.

INTRODUCTION

Educational administration faces economic, social, politic and technologic change (Wan, 2005). In this case, schools have to be flexible for adapt to new situations and changing contexts (Somech, 2010). Within such a context, the effectiveness of schools can be provided by creating an environment in which teachers take risk, use initiative, improve professionalism and have responsibility, instead of traditional hierarchical model (Bolin, 1989; Edwards et al., 2002). Teacher empowerment is one of the main elements to ensuring the transformation at schools (Short, 1994; Short et al., 1994).

Since empowerment is an important element of managerial and organizational effectiveness, there is a growing interest to this concept among researchers and practitioners (Conger and Kanungo, 1988). The concept of empowerment was derived from participative management theories (Spreitzer et al., 1997). However, this concept is more general than traditional concepts like delegation, decentralization and participative decision making and it occurs at different conditions (Conger and Kanungo, 1988; Ford and Fottler, 1995; Short, 1994).

As empowerment is a complex concept, definitions vary

(Quinn and Spreitzer, 1997; Sweetland and Hoy, 2000). However, the concept of empowerment has been examined in two different perspectives in literature. These are relational construct and motivational construct (Conger and Kanungo, 1988). Empowerment as relational construct is identified as sharing power or giving more responsibility and autonomy to organizational members (Keedy and Finch, 1994; Srivastava et al., 2006). Conger and Kanungo (1988) asserted that a relational construct is insufficient in explaining the nature of empowerment and defined the concept of empowerment as "a process of enhancing feelings of self efficacy among organizational members" (p.474). Thomas and Velthouse (1990) extended this approach and suggested that empowerment should be viewed as a multifaceted construct. They defined empowerment as increased intrinsic motivation manifested in four cognitions reflecting an individual's orientation to his or her work role. The four cognitions consisted of meaning, competence, choice, and impact. This more complex perspective focused on the individual experience of empowerment (Spreitzer et al., 1997).

Although the empowerment approach was derived from business world, teacher empowerment advanced parallel with employee empowerment (Edwards et al., 2002; Somech, 2005; Wan, 2005). In the educational context, Lightfoot (1986) described empowerment as opportunities provided to teachers for responsibility, choice, autonomy and authority. Maeroff (1988) suggested that teacher status, knowledge, and access to decision making are important components of empowering teachers. Short (1994) defined empowerment as "a process whereby school participants develop the competence to take charge of their own growth and resolve their own problems" (p.488). White (1992) argued that teacher empowerment increases trust and cooperation, encourages professionalism and decreases isolation. In addition, it was asserted that empowerment increased productivity, improved teacher morale, provided higher student motivation and achievement in the literature (Shen, 2001). So, most educators support empowerment as a method of improving schools (Rice and Schneider, 1994; White, 1992).

Within educational context, the relationship between empowerment and a number of variables was examined. The relationship between empowerment and organizational commitment (Bogler and Somech, 2004; Dee et al., 2003); job satisfaction (Davis and Wilson, 2000; Klecker and Loadman, 1996; Rinehart and Short, 1994; Wu and Short, 1996); power bases (Johnson and Short, 1998; Short and Johnson, 1994); interpersonal trust (Moye et al., 2005); Teachers' work life (White, 1992); teacher efficacy (Edwards et al., 2002); facilitative leadership (Blase and Blase, 1997); principal's social influence (Rinehart et al., 1998); school climate (Short and Rinehart, 1992); authentic pedagogy (Marks and Louis, 1997); school effectiveness (Sweetland and Hoy, 2000) was investigated. Results of some research were inappropriate to expectations. For instance, Short and Rinehart (1992) found a negative relationship between empowerment and school climate. Keiser and Shen (2000) also found that teachers are not empowered in many domains. Shen (2001) indicated that teachers' leadership remained the same over the years. In spite of the results of these researches, it can be said that there was a positive relationship between empowerment and many variables such as commitment, job satisfaction, trust, efficacy, and quality of work life.

In empowering environments, changing of principals' roles and responsibilities has required the altering of leadership behavior types (Blase and Blase, 1997). Leadership behavior is a central element in the empowering process (Raub and Robert, 2010). Blase and Blase (1997) found the relationship between facilitative leadership and teacher empowerment.

Spreitzer et al. (1999) determined the effect of change oriented leadership on empowerment. However, there are so few research and theory focused on the role of

effective leadership within empowering work environments (Konczak et al., 2000).

Empowering leadership behavior is the process of facilitating members' performance by means of enabling and encouraging (Arnold et al., 2000). Ahearne et al. (2005) asserted that empowering leadership includes enhancing the meaningfulness of work, fostering participation in decision making, expressing confidence in high performance and providing autonomy from bureaucratic constraints. Zang and Bartol (2010) indicated that empowering leadership enhances the meaningful of work, refers to confidence in a member's competence, provides self-determination and autonomy, and fosters employee's participation in decision making. The relationship between empowering leadership and organizational commitment (Konczak et al., 2000), in-role behavior (Raub and Robert, 2010), creativity (Zang and Bartol, 2010), self-efficacy (Ahearne et al., 2005), knowledge sharing (Srivastava et al., 2006) was examined. These researches found that the relationship between empowering leadership and these variables was positive and significant.

Teacher empowerment developed simultaneously with critics of traditional hierarchical approaches to leadership and alternative leadership constructs were suggested (Reitzug, 1994). Bolin (1989) argued empowering leadership as an alternative model in order to increase autonomy and professionalism of teachers. Reitzug (1994) described empowering behavior types as support, facilitation and possibility. Konczak et al. (2000) suggested that dimensions of leader empowering behavior include delegation of authority, accountability, encouragement of self-directed decision, information sharing, skill development, and coaching for innovative performance. Encouragement of innovation within organizations is very important in creation of an environment independent from threat and fear (Blase and Blase, 1997). Spreitzer (1995) found the relationship between psychological empowerment and innovative behavior. The purpose of this study was to determine the relationship among empowering leadership, teachers' innovative behavior and innovative climate in elementary schools.

Empowering Leadership and Innovative Behavior

Leadership style is one of the most important factors effecting organizational innovation (Jung et al., 2003). Although the concepts of creativity and innovation are used interchangeably within researches, there has been a consensus about definitions (Scott and Bruce, 1994). Creativity is defined as the generation of novel and useful ideas and innovation is defined as the successful implementation of these ideas within an organization (Amabile et al., 1996; Mumford and Gustafson, 1988;

Woodman et al., 1993). Janssen (2000) suggested that innovative behavior in organizations consists of three different behavioral tasks: idea generation, idea promotion, and idea realization. The innovation need of organizations ended up with focusing on the leader role to make a difference in success of creative efforts (Mumford and Licuanan, 2004). Leaders directly affect their subordinations' behaviors in many ways like role modeling, goal definition, reward allocation and resource distribution (Redmond et al., 1993). Leaders indirectly affect members by encouraging them to try different ways without worrying about being punished in the event that outcomes are negative (Jung et al., 2003). By means of these functions, leaders have an important effect on subordinates' creativity (Amabile et al., 1994; Redmond et al., 1993). A lot of research examined the relationship between leader behavior or leadership styles and creativity in organizations. Redmond et al. (1993) determined that when leader supports constructive problem solving and self efficacy of subordinates, employee performs high-level creativity. Scott and Bruce (1994) found that leadership directly affects individual innovative behavior. Tierney et al. (1999) determined that the quality of leader-follower relationship was based on leader-member exchange theory and it was positively related to employee's creativity performance.

Oldham and Cummings (1996) indicated that employee produce more creative work when they were supervised in a supportive instead of controlling. Jung et al. (2003) determined that transformational leadership directly effects organizational innovation.

Zhang and Bartol (2010) found that empowering leadership effects organizational creativity. Mumford et al. (2002) asserted that two main conclusions can be reached at the end of these researches: the former is that leadership at least some leadership styles are related to creativity; and the later is that the effecting strategies applied by leaders make the employee willing to attempt at creativity and increase the possibility of creativity success. These researches have been done within business organizations. The researches are so limited to examine the effects of leadership styles on innovative behavior of teachers in educational organizations.

H₁: Principals' leadership empowerment behavior will be positively teachers' innovative behavior.

Empowering leadership and innovative climate

Creativity and innovation are affected from organizational factors (Amabile et al., 1996; Mumford et al., 2002). Environmental factors affect the following: new ideas, motivation or willingness of individuals (Redmond, et al., 1993). These factors are strategy, organizational structure, available resources, culture and climate (Jung,

et al., 2003). Scott and Bruce (1994) defined climate as "individual cognitive representations of the organizational setting" (p.581). Mumford et al. (2002) argued that climate has an important effect on creativity. Jung et al. (2003) stated that an innovative organizational climate supports creative efforts and facilitates diffusion of learning.

Moolenaar et al. (2010) described innovative climate as "the shared perceptions of organizational members concerning the practices, procedures, and behaviors that promote the generation of new knowledge and practices" (p.627). Mumford et al. (2002) arranged the interactional dimensions of climate effecting innovation and creativity as risk taking, freedom, work challenge, trust, support, intellectual orientation, intrinsic involvement, and activity. Siegel and Kaemmerer (1978) proposed that leadership is one of the dimensions establishing innovative climate in organizations. A number of studies found that leadership behavior effects innovative climate in organizations (Jung et al., 2003; Moolenaar et al., 2010; Scott and Bruce, 1994). Within these researches, generally the effect of transformational leadership on innovative climate has been examined, and the effect of empowering leadership has been ignored.

H₂: Principals' empowerment leadership behavior will be positively innovative climate.

Innovative climate influences the generation of new ideas and realization of these ideas successfully (Mumford et al., 2002). It reflects norms and practices of encouraging flexibility and facilitates expressing ideas (Charbonnier-Voirin et al., 2010). As innovative climate encourages autonomy and risk taking of members, their intrinsic motivation increases and so they become willing for innovative behavior (Jung et al., 2003). The support of autonomy is more related with intrinsic motivation and less related with pressure and tension (Deci and Ryon, 1987). Tierney et al. (1999) found the relationship between intrinsic motivation and creativity. Janssen (2005) indicated that there was a positive relation between innovative behavior and supervisor's support. Scott and Bruce (1994) determined that innovative climate was related to innovative behavior. Jung et al. (2003) found that transformational leadership can enhance organizational innovation directly and also indirectly by creating an organizational culture in which employees are stimulated to freely discuss and attempt innovative ideas.

H₃: Innovative climate will be positively teachers' innovative behavior.

H₄: Teachers' perception of innovative climate will mediate the relationship between principals' leadership empowerment behavior and teachers' innovative behavior.

METHODS

Participants

The survey model was used in this study. The participants consisted of 710 teachers and 55 principals randomly selected from 55 elementary schools in the center of Nigde and its districts.

Nigde, a small city of the Central Anatolian Region in Turkey, covers an area of 7.312 km². The city centre of Nigde has a population of 109,724 and together with the counties and towns, it is 337,931. The altitude of Nigde is 1229 m and terrestrial climate is dominant in the city. Kayseri, Nevşehir, Aksaray and Konya are the neighboring cities in the Central Anatolian Region; Adana and Mersin are the neighboring cities in the Mediterranean Region. Especially the southern side of the city is higher with the ranges of the Taurus Mountains, including the volcanoes such as Mount Hasan and the Melendiz Mountains.

The highest peak of the ranges of the Taurus Mountains is in Nigde, and winter sports are popular in Aladaglar and Bolkar Mountains. Nigde is also famous for its history ranging from Paleolithic period to the modern day and its historical heritage. There is much evidence of the civilizations involved in the thousands of years of cultural accumulation. Nigde is also a part of the tourist attraction of Cappadocia. Nigde is a rapidly growing and developing city along with the variety and uniqueness of its historical artifacts and pure nature.

The vast majority of the principals (98.2%) were male. Most of the principals (43.65%) had 1 to 10 years seniority. In terms of age, 32.8% were 31 to 40 years old and 32.8% were 41 to 50 years old. 80% of principals were undergraduate, 14.5% were higher education, and 5.5% were graduate.

The sample of teachers contained approximately equal proportions of male and female participants. Of the total, 342 were female (48.2%) and 368 were male (51.8%). The majority of teachers (47%) had 1 to 10 years of professional experience. Most of the teachers (46.8%) were 31 to 40 years old. The educational levels of the teachers who participated in the study were higher education ($n = 53$), undergraduate ($n = 628$) and graduate ($n = 29$).

Instruments

Leadership empowerment behavior

Principals' leadership empowerment behavior was measured by using the Leadership Empowerment Behavior Scale (Ahearne et al., 2005). The scale consisted of 10 items and subscales measures enhancing the meaningfulness of work (three item), fostering participation in decision making (two items), expressing confidence in high performance (two items), and providing autonomy from bureaucratic constraint (three items). Some items of the scale were modified in order to provide adaptability to the school context. Sample items include "My principal helps me understand the importance of my work to the overall effectiveness of the school" (enhancing the meaningfulness of work), "My principal makes many decisions together with us" (fostering participation in decision making), "My principal believes that I can handle demanding tasks" (expressing confidence in high performance), "My principal allows me to do my job my way" (providing autonomy from bureaucratic constraints).

Innovative behavior

Innovative behavior of teachers was measured by using Innovative Behavior Scale developed by Scott and Bruce (1994). This

instrument included six items completed by each of principals for each of their teachers. Examples of items are "Generates creativity ideas", "Develops adequate plans and schedules for the implementation of new ideas".

Innovative climate

Innovative climate of schools was measured with Innovative Climate Scale. The instrument developed by Bryk et al. (1999) to measure schools' orientation disposition. Moolenaar et al. (2010) used this scale to assess teachers' perception of elementary schools' innovative climate. The scale contained six items. Sample items are "Teachers are generally willing to try new ideas"; "Teachers are continuously learning and developing new ideas".

The questionnaires were translated using the translation and back translation method. The teachers' innovative behavior was evaluated by their principals. Teachers assessed the leadership empowerment behavior of principals and the innovative climate of schools. The scales used within this research consist of 20 items. All items were rated on a five point scale ranging from totally disagree (1) to totally agree (5). Exploratory factor analysis was conducted separately to examine the construct validity of the each scale. The selection of a factor based on the criteria eigenvalue ≥ 1.00 and factor loading ≥ 0.50 . It was found that the items clustered a single factor. These findings coincide with the original constructs of the scales (Ahearne et al., 2005; Moolenaar et al., 2010; Scott and Bruce, 1994). Cronbach's alpha coefficients of the scales were 0.95 for the leadership empowerment behavior scale, 0.93 for the innovative behavior scale, and 0.87 for the innovation climate scale. The scales were analyzed by confirmatory factor analysis with LISREL 8.71 to examine the factor structures of the instruments. These findings are reported in Table 1. The results suggest a good fit for a single factor model for each of the scales.

Analysis

A three-step procedure proposed by Baron and Kenny (1986) was used to test the mediation model. According to Baron and Kenny (1986) three criteria must be met to support mediated relationship:

1. The independent variable must be related to the mediating variable
2. The independent variable must be related to the dependent variable
3. The mediating variable must be related to the dependent variable with the independent variable controlled in the model.

If the relationship between the independent variable and the dependent variable is not significant when controlling for the mediator variable, full mediation is present. If the relationship between the independent variable and the dependent variable is reduce in the last step, while remaining significant, partial mediation is present. Mean, standard deviation, Pearson correlation coefficient, and regression analysis were used for the data analysis.

RESULTS

Means, standard deviations and correlations for the leadership empowerment behavior, innovative behavior, and innovative climate are given in Table 2. Table 2 indicated that leadership empowerment behavior was significantly related to innovative behavior and innovative

Table 1. The results of model fit indexes.

Scales	χ^2	df	GFI	CFI	AGFI	RMSEA
Leadership empowerment behavior scale	42.68	26	0.99	1.00	0.97	0.03
Innovative behavior scale	10.58	6	1.00	1.00	0.98	0.03
Innovative climate scale	8.25	6	1.00	1.00	0.99	0.02

Table 2. Mean, standard deviation and correlation.

Variable	M	Ss	1	2	3
Leadership empowerment behavior	4.24	0.69	1.00	0.32*	0.43*
Innovative behavior	4.07	0.59		1.00	0.25*
Innovative climate	3.93	0.65			1.00

*p < 0.01

Table 3. The results of mediating regression.

Test steps	B	β	t
Step 1			
Predictor: Leadership empowerment behavior			
Mediator: Innovative climate	0.22	0.43	12.89*
R = 0.43 R ² = 0.19			
Step 2			
Predictor: Leadership empowerment behavior			
Outcome: Innovative behavior	0.18	0.32	9.07*
R = 0.32 R ² = 0.10			
Step 3			
Predictor: Leadership empowerment behavior			
Mediator: Innovative climate	0.14	0.26	6.63*
Outcome: Innovative Behavior	0.15	0.14	3.66*
R = 0.34 R ² = 0.12			

*p < 0.01

climate ($p < 0.01$). Results showed that there was a significant relationship innovative behavior and innovative climate ($p < 0.01$). The highest positive relationship was found between leadership empowerment behavior and innovative climate.

Table 3 presents the results of the regression analyses following the steps proposed by Baron and Kenny (1986) for the mediation model. Table 3 indicated that leadership empowerment behavior significantly effected innovative behavior ($\beta = 0.32$, $p < 0.01$). Thus, H_1 was supported. The results (step 1) showed that leadership empowerment behavior was a significant predictor of innovative climate ($\beta = 0.43$, $p < 0.01$). These results supported H_2 . The results (step 3) indicated that there was a significant

relationship between leadership empowerment behavior and innovative behavior ($\beta = 0.26$, $p < 0.01$). Thus, innovative climate partially mediated the relationship between leadership empowerment behavior and innovative behavior. H_4 was partially supported. The innovative climate was significantly related to innovative behavior. These results supported H_3 .

DISCUSSION

This study aimed to examine the relationship among empowering leadership, teachers' innovative behavior and innovative climate in elementary schools. Results

indicated that principals' leadership empowerment behavior was a significant predictor of teachers' innovative behavior and innovative climate. It was determined that there was a significant relationship between innovative climate and teachers' innovative behavior. Innovative climate was found to partially mediate the relationship between principals' leadership empowerment behavior and teachers' innovative behavior. According to these findings, it can be said that as the principals' empowering leadership behavior increased, teachers' innovative behavior and innovative climate increased. These findings support the results of previous empirical researches.

Schools face with a rapidly changing environment in 21st century. In this environment, control oriented approaches do not contribute to the improvement of schools (Bolin, 1989). Many researchers and practitioners supported the necessity of empowering teachers for effectiveness of schools (White, 1992). In educational context, many researches were conducted to investigate the relationship between teacher empowerment and some variables. The findings of this study are consistent with results of the studies determining that teacher empowerment was positively related to individual and organizational variables (Bogler and Somech, 2004; Dee et al., 2003; Edwards et al., 2002; Klecker and Loadman, 1996; Marks and Louis, 1997; Moye et al., 2005; Sweetland and Hoy, 2000; White, 1992; Wu and Short, 1996).

Empowerment process has caused to change the roles and responsibilities of leadership (Arnold et al., 2000). According to Bolin (1989), the professionalism and autonomy of teachers can be provided with empowering leadership. Empowering leadership behaviors include supporting teachers, facilitating their work and providing possibility (Reitzug, 1994). Konczak et al. (2000) found that empowering leadership behavior was positively related to job satisfaction and organizational commitment. It has been suggested that leadership have direct and indirect effects on creativity of members (Jung et al., 2003; Redmond et al., 1993). Many researches found the relationship between leadership behaviors or styles and creativity in organizations (Jung et al., 2003; Oldham and Cummings, 1996; Redmond et al., 1993; Scott and Bruce 1994; Tierney et al., 1999; Zhang and Bartol, 2010). The findings of this study support the results of these researches about the effect of leadership behavior on creativity of members. According to this result, it can be said that reducing bureaucratic applications, enhancing trust and participating to decision making increase innovative behavior of teachers in elementary schools.

Leadership is one of the most important elements determining innovative climate in schools (Siegel and Kaemmerer, 1978). It was found that empowering leadership behavior significantly affected innovative climate. Similarly, Moolenaar et al. (2010) indicated that

transformational leadership is a significant predictor of innovative climate at elementary schools.

Mumford et al. (2002) argued that innovative climate has an important effect on creativity and innovative behavior of members. Innovative climate supports risk taking of members, provides autonomy for them and does not punish unsuccessful results (Jung et al., 2003). It was found that innovative climate significantly predicted teachers' innovative behavior. These findings support the results of former researches (Jung et al., 2003; Scott and Bruce, 1994).

The findings showed that empowering leadership behavior effected teachers' innovative behavior both directly and indirectly by creating an innovative climate. The concept of empowerment has been argued in the educational literature for a long time. Related to this subject, many empirical studies were conducted and theoretical claims were suggested. These studies which focus on empowering leadership behavior in educational context are so limited. This study aimed to investigate the empowering leadership behavior effect on teachers' innovative behavior. However, both environmental and individual factors have effect on innovation (Janssen, 2005; Oldham and Cummings, 1996). Individual factors were ignored in this research. The effect of individual factors on teachers' innovative behavior and innovative climate can be examined.

REFERENCES

- Amabile TM, Conti R, Coon H, Lazenby J, Herron, M (1996). Assessing the work environment for creativity. *Acad. Manage. J.*, 39(5): 1154-1184.
- Amabile TM, Schatzel EA, Moneta GB, Kramer SJ (1994). Leader behaviors and the work environment for creativity: Perceived leader support. *Leadersh. Q.*, 15(1): 5-32.
- Ahearne M, Mathieu J, Rapp A (2005). To empower or not to empower your sales force? An empirical examination of the influence of leadership empowerment behavior on customer satisfaction and performance. *J. Appl. Psychol.*, 90(5): 945-955.
- Arnold JA, Arad S, Rhoades JA, Drasgow F (2000). The empowering leadership questionnaire: The construction and validation of a new scale for measuring leader behaviors. *J. Organ. Behav.*, 21: 249-269.
- Baron RM, Kenny DA (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *J. Pers. Soc. Psychol.*, 51 (6): 1173-1182.
- Blase J, Blase J (1997). The micropolitical orientation of facilitative school principals and its effects on teachers' sense of empowerment. *J. Educ. Adm.*, 35 (2): 138-164.
- Bogler R, Somech A (2004). Influence of teacher empowerment on teachers' organizational commitment, professional commitment and organizational citizenship behavior in schools. *Teach. Educ.*, 20: 277-289.
- Bolin FS (1989). Empowering leadership. *Teach. Coll. Rec.*, 91(1): 81-96.
- Bryk A, Camburn E, Louis KS (1999). Professional community in Chicago elementary schools: Facilitating factors and organizational consequences. *Educ. Admin. Q.*, 35: 751-781.
- Charbonnier-Voirin A, El Akremi A, Vandenberghe C (2010). A multilevel model of transformational leadership and adaptive performance and the moderating role of climate for innovation. *Group*

- Organ. Manage., 35(6): 699-726.
- Conger JA, Kanungo RN (1988). The empowerment process: Integrating theory and practice. *Acad. Manage. Rev.*, 13(3): 471-482.
- Davis J, Wilson SM (2000). Principals' efforts to empower teachers: Effect on teacher motivation and job satisfaction and stress. *Clear. House*, 73(6): 349-353.
- Deci EL, Ryan RM (1987). The support of autonomy and the control of behavior. *J. Pers. Soc. Psychol.*, 53(6): 1024-1037.
- Dee JR, Henkin AB, Duemer L (2003). Structural antecedents and psychological correlates of teacher empowerment. *J. Educ. Adm.*, 41(3): 257-277.
- Edwards JL, Green KE, Lyons CA (2002). Personal empowerment, efficacy, and environmental characteristics. *J. Educ. Adm.*, 40(1): 67-86.
- Ford RC, Fottler MD (1995). Empowerment: A matter of degree. *Acad. Manage. Exec.*, 9(3): 21-31.
- Janssen O (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *J. Occup. Organ. Psychol.*, 73: 287-302.
- Janssen O (2005). The joint impact of perceived influence and supervisor supportiveness on employee innovative behaviour. *J. Occup. Organ. Psychol.*, 78: 573-579.
- Johnson PE, Short PM (1998). Principal's leader power, teacher empowerment, teacher compliance and conflict. *Educ. Manage. Adm.*, 26(2): 147-159.
- Jung DI, Chow C, Wu A (2003). The role transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings. *Leadership Q.*, 14: 525-544.
- Keedy JL, Finch AM (1994). Examining teacher-principal empowerment: An analysis of power. *J. Res. Dev. Educ.*, 27(3): 162-175.
- Keiser NM, Shen J (2000). Principals' and Teachers' perceptions of teacher empowerment. *J. Leadership Organ. Stud.*, 7(3): 115-121.
- Klecker BJ, Loadman WE (1996). Exploring the relationship between teacher empowerment and teacher job satisfaction. Paper presented at the annual meeting of the Mid-Western Educational Research Association, Chicago, IL.
- Konczak LJ, Stelly DJ, Trusty ML (2000). Defining and measuring empowering leader behaviors: Development of an upward feedback instrument. *Educ. Psychol. Measure.*, 60(2): 301-313.
- Lightfoot SL (1986). On goodness in schools. Themes of empowerment. *Peabody J. Educ.*, 63(3): 9-28.
- Maeroff GI (1988). The empowerment of teachers: Overcoming the crisis of confidence. New York: Teachers College Press.
- Marks HM, Louis KS (1997). Does teacher empowerment affect the classroom? The implications of teacher empowerment for instructional practice and student academic performance. *Educ. Eval. Pol. Ann.*, 19(39): 245-275.
- Moolenaar NM, Daly AJ, Slegers PJC (2010). Occupying the principal position: Examining relationships between transformational leadership, social network position, and schools' innovative climate. *Educ. Admin. Q.*, 46(5): 623-670.
- Moye MJ, Henkin AB, Egleby RJ (2005). Teacher-principal relationships: Exploring linkages between empowerment and interpersonal trust. *J. Educ. Adm.*, 43(3): 260-277.
- Mumford MD, Gustafson SB (1988). Creativity syndrome: Integration, application, and innovation. *Psychol. Bull.*, 103(1): 27-43.
- Mumford MD, Licuanan B (2004). Leading for innovation: Conclusions, issues, and directions. *Leadersh. Q.*, 15: 163-171.
- Mumford MD, Scott GM, Gaddis B, Strange JM (2002). Leading creative people: Orchestrating expertise and relationship. *Leadersh. Q.*, 13: 705-750.
- Oldham GR, Cummings A (1996). Employee creativity: Personal and contextual factors at work. *Acad. Manage. J.*, 39(3): 607-634.
- Quinn RE, Spreitzer GM (1997). The road to empowerment: Seven questions every leader should consider. *Organ. Dyn.*, 26(2): 37-49.
- Raub S, Robert C (2010). Differential effects of empowering leadership on in-role and extra-role employee behaviors: Exploring the role of psychological empowerment and power values. *Hum. Relat.*, 63(11): 1743-1770.
- Redmond MR, Mumford MD, Teach R (1993). Putting creativity to work: Effects of leader behavior on subordinate creativity. *Organ. Behav. Hum. Decis.*, 55: 120-151.
- Reitzug UC (1994). A case study of empowering principal behavior. *American Educ. Res. J.*, 31(2): 283-307.
- Rice EM, Schneider GT (1994). A decade of teacher empowerment: An empirical analysis of teacher involvement in decision making, 1980-1991. *J. Educ. Adm.*, 32(1): 43-58.
- Rinehart JS, Short PM (1994). Job satisfaction and empowerment among teacher leaders, reading recovery teachers and regular classroom teachers. *Education*, 114(4): 570-580.
- Rinehart JS, Short PM, Short RJ, Eckley M (1998). Teacher empowerment and principal leadership: Understanding the influence process. *Educ. Admin. Q.*, 34: 630-649.
- Scott SG, Bruce RA (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Acad. Manage. J.*, 37(3): 580-607.
- Shen J (2001). Teacher and principal empowerment: National, longitudinal, and comparative perspectives. *Educ. Horiz.*, 79(3): 124-29.
- Short PM (1994). Defining teacher empowerment. *Education*, 114(4): 488-492.
- Short PM, Greer JT, Melvin WM (1994). Creating empowered schools: Lessons in change. *J. Educ. Adm.*, 32 (4): 38-52.
- Short PM, Johnson PE (1994). Exploring the links among teacher empowerment, leader power, and conflict. *Education*, 114(4): 581-592.
- Short PM, Rinehart JS (1992). Teacher empowerment and school climate. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA, April.
- Siegel SM, Kaemmerer WF (1978). Measuring the perceived support for innovation in organizations. *J. Appl. Psychol.*, 63(5): 553-562.
- Somech A (2005). Teachers' personal and team empowerment and their relations to organizational outcomes: Contradictory or compatible construct? *Educ. Adm. Q.*, 41(29): 237-266.
- Somech A (2010). Participative decision making in schools: A mediating-moderating analytical framework for understanding school and teacher outcomes. *Educ. Adm. Q.*, 46(2): 174-209.
- Spreitzer GM (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Acad. Manage. J.*, 38(5): 1442-1463.
- Spreitzer GM, Janasz SCD, Quinn RE (1999). Empowered to lead: The role of psychological empowerment in leadership. *J. Organ. Behav.*, 20: 511-526.
- Spreitzer GM, Kizilos MA, Nason SW (1997). A dimensional analysis of the relationship between psychological empowerment and effectiveness, satisfaction, and strain. *J. Manage.*, 23(5): 679-704.
- Srivastava A, Bartol KM, Locke EA (2006). Empowering leadership in management teams: Effects on knowledge sharing, efficacy, and performance. *Acad. Manage. J.*, 49(6): 1239-1251.
- Sweetland SR, Hoy WK (2000). School characteristics and educational outcomes: Toward an organizational model of student achievement in middle schools. *Educ. Adm. Q.*, 36(5): 703-729.
- Thomas KW, Velthouse BA (1990). Cognitive elements of empowerment: An interpretive model of intrinsic task motivation. *Acad. Manage. Rev.*, 15(4): 666-681.
- Tierney P, Farmer SM, Graen GB (1999). An examination of leadership and employee creativity: The relevance of traits and relationship. *Pers. Psychol.*, 52(3): 591-620.
- Wan E (2005). Teacher empowerment: Concepts, strategies, and implications for schools in Hon Kong. *Technol. Coll. Rec.*, 107(4): 842-861.
- White PA (1992). Teacher empowerment under ideal school-site autonomy. *Educ. Eval. Pol. Ann.*, 14(1): 69-82.
- Woodman RW, Sawyer JE, Griffin RW (1993). Toward a theory of organizational creativity. *Acad. Manage. Rev.*, 18(2): 293-321.
- Wu V, Short PM (1996). The relationship of empowerment to teacher job commitment and job satisfaction. *J. Instr. Psychol.*, 23(1): 85-89.
- Zang X, Bartol KM (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creativity process engagement. *Acad. Manage. J.*, 53(1): 107-128.