



Examination of Relationships between Instructional Leadership of School Principals and Self-Efficacy of Teachers and Collective Teacher Efficacy*

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Abstract

The purpose of this study was to examine the relationships between school principals' instructional leadership behaviors and self-efficacy of teachers and collective teacher efficacy. In this regard, a model based on hypotheses was designed to determine the relationships among variables. The study sample consisted of 328 classroom and branch teachers employed in primary schools in Ankara. Instructional Leadership Scale, Teachers' Sense of Efficacy Scale and Collective Efficacy Scale were used to gather data. Structural Equation Modeling was performed to test the model. Research findings indicated that the model fitted the data well with acceptable goodness of fit statistics. Consequently, instructional leadership had a significant direct and positive impact on collective teacher efficacy. Additionally, it was appeared that teachers' self-efficacy moderated the relationship between instructional leadership and collective teacher efficacy. Several suggestions were presented for improving teachers' self and collective efficacy.

Key Words

Instructional Leadership, Collective Teacher Efficacy, Teachers' Self Efficacy, Teacher, and School Principal

Teachers constitute one of the most important dimensions of innovative acts in education, school development, and effective school movements (Balci, 2007; Özdemir, 2000). Teachers' beliefs about their self-efficacy (Büyüköztürk, Akbaba Altun, & Yıldırım, 2010) and collective-efficacy that has been discussed in various researches in recent

years (Antonelli, 2005; Cooper, 2010; Mackenzie, 2000) were counted among the most important variables that determines teachers' performance and effectiveness in schools. Researches on teachers' sense of self-efficacy indicate that self-efficacy is closely related to student achievement (Allinder, 1995; Caprara, Barnabelli, Steca, & Malone, 2006; Domsch, 2009; Ross, 1992; Woolfolk Hoy & Davis, 2006), family involvement in education (Garcia, 2004; Hoover-Dempsey, Bassler, & Brissie, 1987), tendency to risk taking and innovation (Basım, Korkmazıyrek, & Tokat, 2008; Ghaith & Yaghi, 1997; Ross, 1994), collective efficacy (Goddard & Goddard, 2001), and job stress (Betoret, 2009; Ross, 1994). It can clearly be expressed that the organizational forms and structures of schools, one of the most important organizations of society, have effects on the lives of everyone in the school (Lee, Dedrick, & Smith, 1991). One of the important elements of this organizational forms and

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structures is school principal's leadership. Previous research on leadership (Armstrong-Coppins, 2003; Cagle & Hopkins, 2009; Demir, 2008; Hipp, 1995, 1996; Lee et al.; Kurt, 2009; Nicholson, 2003; Ross & Gray, 2006; Oliver, 2001; Williams, 2010) states that some leadership behaviors are effective on determining teachers' perceptions of self and collective efficacy. According to related literature, among these leadership behaviors the instructional leadership behaviors, which became popular with the effective school movements (Short & Spencer, 1989), are related to the variables such as job performance (Enueme & Egwunyenga, 2008), student achievement (Alig-Mielcarek, 2003; Gaziel, 2007; Hearn, 2010; Krug, 1992; O'Donnell & White, 2005), teachers' professional development (Blasé & Blase, 1999a, 1999b), and teachers' attitudes towards the change (Kurşunoğlu & Tanrıoğen, 2009). Although there are some researches indicating that school principals' instructional leadership behaviors are related to teachers' self-efficacy (Derbedek, 2008; Howard, 1996; Tschannen-Moran & Hoy, 2007) and collective efficacy (Brinson & Steiner, 2007), it can be stated that studies in this area are not sufficient especially in terms of instructional leadership. In this regard, more research about teachers' self-efficacy, collective efficacy, and principals' behaviors that affect these efficacy beliefs is needed. It is expected that explaining the relationships between self-efficacy and collective efficacy, and detecting the effects of school principals' leadership behaviors on these efficacy beliefs will significantly contribute to improving school effectiveness and capacity, and increasing student achievement. At this point, Bitto and Butler (2010) also emphasize that more research must be conducted to determine the factors that reinforce teachers' efficacy. As a result, it is thought that the findings of this research that aim to reveal the effects of school principals' instructional leadership behaviors and teachers' self-efficacy perceptions on teachers' collective efficacy will make significant contributions to the literature.

The Purpose of the Study

The purpose of the study is to examine the relationships between school principals' instructional leadership behaviors and teachers' self-efficacy and collective efficacy, and also to observe the direct and indirect effects, through teachers' self-efficacy, of instructional leadership on teachers' collective efficacy.

Conceptual Framework

Teachers' Self Efficacy

Self-efficacy is people's beliefs about their talents to activate motivation, cognitive resources, and action series need for ensuring control over the events in their lives (Wood & Bandura, 1989). Teachers' self-efficacy which has been developed in Bandura's concept of self-efficacy generally consists of teachers' beliefs about effecting and coping with students who have difficulty in motivation and learning (Guskey, 1987; Lewandowski, 2005; Yılmaz & Çokluk Bökeoğlu, 2008). As well as being the indicator of teachers' effectiveness, teachers' self-efficacy is indispensable for an effective school and program (Bitto & Butler, 2010). Teachers' self-efficacy beliefs are accepted to be an important variable that have to be considered in the process of restructuring schools and establishing effective schools (Hoy & Woolfolk, 1993; Pajares & Miller, 1994; Ross, 1994).

Collective Teacher Efficacy

Bandura (1997, p. 477) expressed that "collective efficacy is a shared belief of a group about organizing and managing action phases needed for producing skills at certain levels". In other words, collective efficacy reflects the belief of a group about efficiently organizing the actions needed for accomplishing a task (Goddard, Hoy, & Hoy, 2004) and it determines the power of organizations (Bandura, 1982). The reflection of collective efficacy in schools is called collective teacher efficacy. Collective teacher efficacy is defined as "teachers' perceptions that their effort, as a group, can have a positive impact on students" (Goddard, 2001, p. 467; Goddard, Hoy, & Hoy, 2000, p. 480). From this definition it can be expressed that the group of teachers who have high level of collective efficacy will be more persistent on overcoming the obstacles they face while educating students (Demir, 2008; Goddard, 2002; Hoy, Sweetland, & Smith, 2002).

Instructional Leadership

School principals are expected to carry out a lot of duties at schools. One of them is instructional leadership which has been at issue and studied recently (Hallinger, 2011). Daresh and Ching-Jen (1985) describe instructional leadership as principal behaviors' affecting learning and teaching directly and indirectly. An efficient instructional leader, by providing an effective teaching and learning envi-

ronment (Çelik, 2000; Gümüşeli, 1996; Hallinger & Murphy, 1987; Smith & Andrews, 1989), would increase the quality of education at schools (Marks & Printy, 2003), move the schools towards the ideal position, and increase student achievement (Özdemir & Sezgin, 2002). Hallinger (2005) states that instructional leadership has come into prominence with the increase in the expectations from schools and the efforts to establish a more accountable school system and it has drawn considerable interest of researchers.

Method

As this study aims at examining the relationships between school principals' instructional leadership behaviors and both teacher self-efficacy and collective efficacy, it has been designed as an associational research model. While descriptive studies aim to describe a given state of affairs as fully and carefully as possible, the purpose of the associational research is to examine the relationships between two or more variables without trying to influence them (Fraenkel & Wallen, 2009; Karasar, 2009).

Population and Sample

The population of the research consisted of classroom and branch teachers working in public primary schools in the center of Ankara in 2010-2011 academic year. The research sample consisted of 328 classroom and branch teachers. 65.5% of the participants (n=215) were female and 34.5% (n = 113) were male. The average of the participants' age was 34.3 (SD = 7.20). The average of the participants' teaching experience was 10.5 years (SD = 6.60). On the other hand, 47.9% of these participants were classroom teachers, and 52.1% of them were branch teachers.

Instruments

In this study, *Teachers' Sense of Efficacy Scale* developed by Tschannen-Moran and Hoy (2001) and adapted to Turkish culture by Çapa, Çakıroğlu and Sarıkaya (2005) was used to measure teachers' self-efficacy, and to gather data about teacher collective efficacy, *Collective Efficacy Scale* developed by Goddard et al. (2000) was used. To evaluate school principals' instructional leadership behaviors, instructional leadership scale developed by Şişman (2002) was used. In order to test the construct validity of the instruments, Confirmatory Factor Analysis (CFA) was done. The findings were inter-

preted on the basis of different fit indexes expressed in the literature (Byrne, 1998; Fan, Thompson, & Wang, 1999; Hu & Bentler, 1999; Jöreskog & Sörbom, 1993; Schreiber, Nora, Stage, Barlow, & King, 2006; Sümer, 2000).

Data Analysis

In the study, Pearson product-moment correlation coefficient (r) was calculated to determine the relationships between variables. Moreover, path analysis was performed for the analysis of direct and indirect effects of independent variables on dependent variables in the framework of structural equation model (Yılmaz & Çelik, 2009). AMOS 18, LISREL 8.70 and SPSS15.0 programs were used in data analysis.

Findings

When the relationships between the research variables were examined, it was observed that the highest level of correlation was between collective efficacy and supporting and developing teachers, the fourth dimension of instructional leadership ($r = .39, p < .01$). On the other hand, when the relationships between the dimensions of instructional leadership and teachers' self-efficacy were observed, it was obviously seen that the highest level of relationship was between evaluating teaching process and students, a dimension of instructional leadership, and teachers' self-efficacy for using instructional strategies ($r = .27, p < .01$). At the same time, there were significant relationships between teachers' self-efficacy and collective teacher efficacy. Another result derived from the correlation analysis was that instructional leadership had a partially stronger relationship with collective teacher efficacy when compared to teachers' self-efficacy, besides, it was put forward that instructional leadership had a positive and significant effect on collective efficacy ($\beta = .34, p < .01$). Additionally, instructional leadership had a positive and significant effect on self-efficacy ($\beta = .32, p < .01$). When the direct effect of self-efficacy on collective efficacy was analyzed, a positive and significant effect was observed ($\beta = .13, p < .05$). It was also seen that instructional leadership had a positive, significant and indirect effect on collective efficacy through self-efficacy ($\beta = .04, p < .05$). In other words, teachers' self-efficacy plays a mediator role between instructional leadership and collective teacher efficacy. As a result, it can be asserted that self and collective efficacy of teachers increase depending on the instructional leadership they perceive.

Discussion

Firstly, all the variables were analyzed and significant relationships were discovered. Many previous studies showed that there were positive and significant relationships between collective efficacy and teachers' self-efficacy (Goddard et al., 2000; Kurt, 2009; Lev & Koslowsky, 2009; MacKenzie, 2000; Skaalvik & Skaalvik, 2007). Research findings are parallel to the findings of the research mentioned above. Bandura (1997) used the term *reciprocal causality*, a two-way relationship, while interpreting relationship between collective teacher efficacy and teachers' self-efficacy. It is thought that it would be useful to interpret the findings of this study in the context of reciprocal causality. In the study, it was put forward that instructional leadership appears as an effective antecedent while building the collective efficacy. Jhanke (2010) listed the factors which were effective in developing collective efficacy. Some of those factors were a positive and supportive environment, clear and understandable vision and aims, high expectations, a significant professional development, and shared leadership. Among them, especially clear and understandable vision and specifying high expectations behaviors are also the behaviors of an instructional leader. Mastery experiences, vicarious experience, social persuasion and emotional states are listed among the resources of self-efficacy (Wood & Bandura, 1989). These factors, which are crucial in the development process of self-efficacy also form the basis for building collective efficacy (Goddard, Hoy et al., 2004).

Another finding of the research was that school principals' instructional leadership behaviors have a positive and significant effect on teachers' self-efficacy. When the related literature is reviewed, studies supporting this finding can easily be seen. For instance, Derbedek (2008) found that school principals' instructional leadership behaviors predicted approximately 15% of teachers' self-efficacy. Similarly, Howard (1996) mentions about a causal link between these two variables. Besides, Ross (1994) expresses that leadership is an important variable in determining teachers' self-efficacy. Weisel and Dror (2006) note that there is a positive and significant relationship between supportive and non-threatening leadership and teacher self-efficacy.

Finally, in the study, it was revealed that instructional leadership affected the collective efficacy indirectly through teachers' self-efficacy. In other words, when the school principals demonstrated instructional leadership behaviors, teachers' per-

ceptions about their own self efficacy grew stronger. They saw themselves more sufficient in educating and teaching the students, and they made a great effort for this purpose. As the number of teachers who had high self-efficacy increased, their collective efficacy grew stronger. In other words, instructional leadership behaviors can be said to increase collective efficacy although Fancera (2009) asserted the opposite. Thus, teachers at a school set an important step on the road to be an effective team. Accordingly, Demir (2008) expresses that self-efficacy plays a mediator role between collective efficacy and transformational leadership. Besides, Scurry (2010) emphasizes that positive feedbacks and leadership behaviors that strengthen teachers professionally predict the three dimensions of teachers' self-efficacy significantly.

In addition to the discussion mentioned above, it can be asserted that study findings can add significant information to the literature about students' academic achievement. Studies about collective efficacy (Bandura, 1993; Goddard, 2001; Goddard, Hoy et al., 2004; Goddard, LoGerfo, & Hoy, 2004; Jackson, 2009) and teacher self-efficacy (Allinder, 1995; Caprara et al., 2006; Domsch, 2009; Ross, 1992; Woolfolk Hoy & Davis, 2006) revealed that these two variables played an important role for increasing students' academic achievement. Thus, it can be said that the model tested in this study also presents a way to increase student achievement. However, this assertion should be tested with a new model by future studies.

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