



# School principals' leadership style and school outcomes

## The mediating effect of powerbase utilization

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### Abstract

**Purpose** – While the significance of principals for the organizational behavior of schools is crucial, school leaders' influence on school outcomes is indirect and mediated through various means that leaders employ in order to increase the productivity of their school. Although the exercise of power is viewed among the main factors explaining followers' willingness to comply with leaders' demands and means to promote school effectiveness, it is rather surprising that the educational administration literature lacks substantial evidence testifying to the mediating effect that principals' use of various powerbases has on school effectiveness. The purpose of this paper is to make an attempt to fill this gap.

**Design/methodology/approach** – Questionnaires were administered to 954 teachers coming from 191 randomly sampled public elementary schools.

**Findings** – Evidence testifying to the relation between leadership styles and use of powerbases suggests that the transformational leadership style is positively related to the use of soft powerbases and negatively related to the use of harsh powerbases. Findings also show that leadership style and powerbase utilization differentiate effective and ineffective schools. Finally, it is evident that soft powerbases such as expertise, personal reward and referent powerbases partially mediate the relation between the transformational leadership style and school effectiveness, moderating the negative relation found between the passive leadership style and school effectiveness.

**Originality/value** – These findings confirm that powerbases are in fact a mechanism through which school leaders influence school effectiveness. Implications are further discussed.

**Keywords** Leadership, Schools, Organizational effectiveness, Effectiveness

**Paper type** Research paper

### Literature review

For several decades now empirical studies testify to the significant role that school principals' leadership style and professional conduct play in explaining the effectiveness of school processes and outcomes (Fullan and Watson, 2000; Leithwood *et al.*, 2010; Silins, 1992). While educational leadership researchers share a consensus that school leaders' influences are not direct but rather mediated through numerous organizational factors (Leithwood *et al.*, 2010), research has not provided clear answers regarding these mediating mechanisms so far (Crum *et al.*, 2009).

The current study attempts to shed new light on some of the mechanisms that school leaders may employ as means to promote school performance. Specifically the study argues that school leaders' utilization of powerbases which enable leaders to change their subordinates' attitudes or behaviors (Bass and Bass, 2008; Pierro *et al.*, 2008; Raven, 2008; Schwarzwald *et al.*, 2001) should be considered a significant and useful mediating factor for the relation between their leadership style and school outcomes.

The relation between principals' conduct and school outcomes has captured much attention over the years, leading to many research endeavors (Hallinger and Heck, 1996).



One frequently mentioned premise is that the quality of school performance is linked to principals' leadership style and professional conduct (Fullan and Watson, 2000; Leithwood *et al.*, 2010; Leithwood and Jantzi, 2008; Leithwood and Levin, 2005; Robinson *et al.*, 2009; Silins, 1992; Witziers *et al.*, 2003). Specifically, evidence testifies to the connection between transformational leadership style and school outcome indicators such as teachers' satisfaction and self-efficacy, students' academic achievements, school climate, school effectiveness, teachers' organizational commitment and schools' organizational learning (Amitay *et al.*, 2005; Bogler, 2001; Dumay, 2009; Hipp, 1997; Hipp and Bredson, 1995; Kirby *et al.*, 1992; Koh *et al.*, 1995; Leithwood, 1992, 1995; Leithwood and Jantzi, 1999; Oplatka, 2009; Silins *et al.*, 2000; Silins and Mulford, 2004; Stewart and Roth 2001). Studies have also shown that the relation between transactional leadership style and school outcomes is inconsistent and that laissez faire (LF) leadership style is negatively connected with school outcomes (Korland *et al.*, 2010).

Nevertheless, research has so far not provided clear answers regarding the mechanism responsible for this relation (Crum *et al.*, 2009; Hallinger and Heck, 1996; Leithwood and Jantzi, 1999; Luyten *et al.*, 2005; Witziers *et al.*, 2003). Earlier works have suggested that school leaders have a significant and direct influence on school processes and outcomes (Edmonds, 1979; Fuller, 1987; Rutter *et al.*, 1979). However, school leaders' influence on school outcomes seems to be indirect and is mediated through various means that leaders employ in order to increase the productivity of their school. In recent years, therefore, the emerging body of knowledge proposes that although school leaders have a crucial impact on school processes and outcomes, this relation is mediated rather than direct (Leithwood *et al.*, 2010; Leithwood and Jantzi, 2008; Witziers *et al.*, 2003).

### **Mediating the relationship between principals' leadership and school outcomes**

A vast number of research findings testify to the indirect influence principals have on school effectiveness, mainly through teachers' perceptions of principals' professional conduct and leadership style (Bogler, 2001; Crum *et al.*, 2009; Leithwood and Wahlstrom, 2008). Research indicates that teachers are influenced in particular by principals' decision-making style (Bogler, 2001; Rice and Schneider, 1994), academic standards (Gurr *et al.*, 2006; Marzano *et al.*, 2005; Smith and Hoy, 2007), tendency and willingness to empower (Bogler and Somech, 2004; Gonzales and Short, 1996) and involve teachers in school vision setting processes (Jurewicz, 2004; Korland *et al.*, 2010), the support they provide to teachers (Leithwood and Wahlstrom, 2008; Tschannen-Moran, 2009), their ability to establish trust (Bryk and Schneider, 2003; Goddard *et al.*, 2009) and their involvement in teachers' professional development (Wahlstrom and Louis, 2008).

Leithwood *et al.*, (2010, p. 673) identified four paths through which school leaders influence student learning and school outcomes: the rational path, referring to qualities of teachers' pedagogical conduct and proficiency influenced through school principals' problem solving capacities and knowledge of relevant leadership and pedagogical practices (Bell *et al.*, 2003; Jurewicz, 2004; Leithwood and Jantzi, 1990); the emotional path, referring to teachers' perceived emotional state influenced through the extent to which the principal inspires and supports them (Leithwood and Jantzi, 1990); the organizational path, referring to the formal structure of the school and the organization of work processes and procedures, showing principals' professional or bureaucratic orientation (Tschannen-Moran, 2009); and, the family path, referring to students' background characteristics which are less subjected to the influence of the school

principal (Jencks *et al.*, 1972; Kyriakides and Creemers, 2008). While the exercise of power is considered among the main factors explaining followers' willingness to comply with leaders' demands (Bass, 1990; Inbar, 2000; Pfeffer, 1994; Randolph and Kemery, 2011; Raven, 2008), it is rather surprising that educational administration literature lacks substantial evidence demonstrating the mediating effect that school principals' use of various powerbases has on school effectiveness.

### **The use of powerbases as mediators**

Leadership is the exercise of influence. Therefore, the use of various powerbases reflects the specific tactics applied by leaders to change their subordinates' attitudes or behaviors (Bass and Bass, 2008; Pierro *et al.*, 2008; Raven, 2008; Schwarzwald *et al.*, 2001).

According to the Social Power Bases theory developed by French and Raven (1959) and Raven (1965), six main powerbases may be identified:

- (1) coercion, referring to the use of punishment or threat for non-compliance;
- (2) reward, referring to the use of compensation to make subordinates comply;
- (3) legitimacy, referring to demand for compliance based on hierarchical position and role superiority;
- (4) expertise, referring to the use of knowledge to make followers obey;
- (5) reference, referring to the extent to which appreciation and respect are used as means to achieve compliance; and
- (6) information, referring to the extent to which persuasive argumentation or logical reasoning are used to obtain compliance.

A more recent development of this classification suggests that the six powerbases may be grouped to two main categories: soft and harsh (Erchul *et al.*, 2001; Koslowsky and Schwarzwald, 2001; Raven, 1992, 1993; Raven *et al.*, 1998; Schwarzwald *et al.*, 2006). Harsh powerbases testify to leaders' tendency to employ coercive powerbases which emphasize their formal authority and, therefore, ability to reinforce or punish (Erchul *et al.*, 2001; Schwarzwald *et al.*, 2006). Soft powerbases reflect leaders' interpersonal influence through expertise, rational persuasion, mutual dependency or charisma (Kipnis, 2001; Raven *et al.*, 1998). Research focussing on the connection between powerbases and organizational effectiveness revealed that organizational effectiveness is positively connected to soft powerbases and negatively connected to harsh powerbases (Bindu and Narendra, 2008; Erchul and Martens, 1997; Jamieson and Thomas, 1974; Miller and Rowan, 2006; Rahim, 1989; Schriesheim *et al.*, 1991; Schwarzwald *et al.*, 2006; Sharma and Gupta, 2000, 2008; Yukl and Falbe, 1991).

Studies have also shown that different powerbases are associated with different leadership styles (Deluga and Souza, 1991; Hofstede, 2001; Shao and Webber, 2006). Specifically, it was found that transformational leaders typically tend to employ soft powerbases while transactional leaders tend to employ harsh powerbases (Bindu and Narendra, 2008; Deluga and Souza, 1991; Koslowsky and Schwarzwald, 2001; Pierro *et al.*, 2006; Short and Rinehart, 1992; Stimson and Appelbaum, 1988; Yukl and Tracey, 1992). Nevertheless, it is important to acknowledge that regardless of their leadership style and tendency to use a particular set of powerbases, leaders use the various powerbases interchangeably, in response to diverse and dynamic organizational circumstances (Bindu and Narendra, 2008; Schwarzwald *et al.*, 2001; Yukl and Tracey, 1992).

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Hence, although both powerbases and leadership styles are significant for school effectiveness, the literature lacks evidence testifying to the mediating effect that the use of powerbases has on the relation between school principals' leadership styles and school effectiveness. The following study attempts to fill this gap.

Specifically, three research hypotheses are explored:

- H1. The association between different leadership styles and school effectiveness is likely to vary.
- H2. School principals' utilization of different powerbases will be associated with their leadership style.
- H3. Principals' use of powerbases will have a mediating effect on the relationship between principals' leadership style and school effectiveness.

## Method

### *Sample*

The study is based on a nation-wide sample of Israeli public elementary schools. Educators who work in the Israeli educational system hold civil service positions and are tenured after three years of employment. Elementary school educators obtain tenure from the Ministry of Education and not from their schools and, therefore, school principals have no authority to hire or fire them as they are the employees of the educational system. The chain of command runs from the Israeli Ministry of Education through the educational districts located in different geographical parts of Israel to the schools (Nir, 1998). Most of Israel's public elementary schools are domesticated organizations (Carlson, 1964) in the sense that enrollment in the school is compulsory and is based on the children's residence. Traditionally, the Israeli educational system featured a high degree of central control to ensure maximum equality within the educational system (Nir, 2001). This means that Israel's schools are managed by a centralized bureaucracy responsible for the educational policy and national goals, the budget, the curriculum and for monitoring schools through a central control supervisory and superintendence network. Since the 1970s, however, there has been some tendency toward decentralization of the Israeli educational system, although so far limited accomplishments may be detected only in terms of the authority delegated to the school level (Nir, 2003, 2009).

The choice of elementary schools for the current study was supported by the fact that national achievement tests are conducted in each elementary school by the National Council for Measurement and Evaluation, enabling the attainment of an objective indication of school effectiveness.

The 1,500 elementary schools operating in the public school system were divided into four groups based on a composite measure of schools' mathematics scores in the national tests and their socio-economic status (SES), pointing to the character of their social environment. In considering literature pointing to the strong correlation between students' achievement and their socio-economic background (SES) (Bevans *et al.*, 2007; Coleman, 1966; Gaziel, 1997; Gu *et al.*, 2008), school effectiveness was assessed based on a composite index made of schools' average math scores obtained from the National Council for Measurement and Evaluation, multiplied by schools' average SES score. Effective schools are those characterized by a relatively lower SES and higher test scores, whereas ineffective schools are

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those where SES is relatively high and test scores are relatively low. Nevertheless, the database contains the entire continuum of scores representing school effectiveness measures. The use of this composite measure follows previous studies that indicated the high correlation between students' achievements and their SES (Coleman, 1966; Gu *et al.*, 2008; Summers and Wolfe, 1977). Moreover, using school scores to designate school effectiveness is a much more objective indicator compared to organizational members' perceptions of school effectiveness and, therefore, is likely to positively contribute to the reliability of our findings. Finally, the use of this composite measure for school effectiveness ensures variance in the values of the dependent variable and the representation of the entire distribution of schools rather than just those characterized by high or low SES and academic achievements. In considering our research model, this conduct may be viewed as beneficial since it allows for better establishing the assumed contribution of leadership style and use of powerbases to school effectiveness represented by the full range of schools' background features and test scores.

After schools headed by first year principals were excluded, 200 schools were randomly sampled representing the entire range of SES and mathematics scores. Eventually, the database is based on the responses of 954 tenured teachers coming from 191 schools. All six districts of the Israeli educational system were represented in each of the groups. Three groups contained 48 schools and the fourth one – 47 schools; 62 percent of the schools in the sample were general state Jewish schools; 25 percent were religious state Jewish schools and 13 percent were state Arab schools. The teachers' average age is 41 years, with 17 years of professional experience on average; 85 percent of the teachers in the sample are women.

#### *Data collection*

All data were collected in a single school year to ensure that school effectiveness measures refer to the same measurement performed by the National Council for Evaluation and Measurement. Based on a formal approval obtained from the Ministry of Education, which is obligatory when researchers wish to collect data in the public school system, questionnaires were administered in each school by the researchers. Based on school principals' approval, the researchers came to schools, distributed questionnaires among teachers during break time and collected them by the end of the break. Teachers who participated in the study voluntarily were told that the purpose of the study is to characterize the typical leadership style of school principals in Israeli elementary schools. To ensure anonymity, the researchers explained that all data collected would remain confidential and would not be shared with anyone including the school principal. It was further explained that although statistical analysis procedures would be done using schools as the unit of analysis, the schools' identity would not be revealed. The personal interaction with the researchers seemed to promote teachers' willingness to participate in the study as the 95 percent rate of questionnaire return may indicate.

In line with Podsakoff *et al.*'s (2003) recommendations, predictor and criterion variables were obtained from different sources: teachers were asked to assess principals' leadership style and application of powerbases using a seven-point Likert type scale ranging from (1) never to (7) always, while school effectiveness was assessed based on a composite index made of schools' average math scores obtained from the National Council for Measurement and Evaluation and schools' SES, pointing to the character of their social environment.

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*The research instrument*

*Leadership style.* Principals' leadership style was measured using the MLQ form 5x questionnaire developed by Bass and Avolio (1990). Following the inconsistent factor structure reported in literature (Eyal and Kark, 2004; Lowe *et al.*, 1996; Tejada *et al.*, 2001; Tepper and Percy, 1994), an exploratory factor analysis (EFA) was performed. Three items, all showing the contingent reward leadership style (CRW), show multiple loadings. After these items were removed, three distinct factors were obtained: a transformational leadership style ( $\alpha = 0.91$ ) indicating inspirational charismatic and challenging leadership; a transactional leadership style ( $\alpha = 0.68$ ) indicating CRW and management by exception active (MBEA) leadership; and a passive leadership style ( $\alpha = 0.84$ ) indicating LF and management by exception passive (MBEP) leadership. A Confirmatory Factor Analysis (CFA) procedure was then employed. The results confirmed the hypothesized three-factor model. All fit indexes (CFI = 0.912, GFI = 0.915; RMSEA = 0.065) met the recommended criteria (Bagozzi *et al.*, 1991; Brown, 2006; Mueller, 1996). These results are in line with previous studies indicating that all the components of the transformational leadership style tend to group in a high-order construct (Berson and Avolio, 2004; Bullis *et al.*, 1997; Eyal and Kark, 2004; Korland *et al.*, 2010), and that an overlap typically exists between LF and MBEP (Avolio *et al.*, 1999; Den Hartog *et al.*, 1997; Druskat, 1994; Dumdum *et al.*, 2002; Eyal, 2000; Eyal and Kark, 2004; Hinkin and Schriesheim, 2008).

The overlap found between CRW and MBEA was less expected considering previously reported findings indicating the relation between CRW and the transformational leadership measures (Dumdum *et al.*, 2002; Tejada *et al.*, 2001). This finding may be explained based on observations by Goodwin *et al.* (2001) and Hinkin and Schriesheim (2008), who consider CRW to consist of two sub-dimensions: "Explicit Psychological Contract" (EPC) representing the "very epitome of transactional, or exchange, behavior" (Goodwin *et al.*, 2001, p. 760), and "Implicit Psychological Contract" (IPC), representing a faith-based contingency between the leader and his subordinates testifying to the interpersonal exchange process. While IPC was positively correlated with transformational leadership, EPC was positively correlated to the MBEA sub-scale (Goodwin *et al.*, 2001). Hence, the overlap we found between CRW and MBEA may be a direct outcome of the EFA analysis that led to the omission of three items testifying to IPC.

*Use of powerbases.* Principals' use of powerbases was measured using a 33-item scale based on a research tool developed by Raven *et al.* (1998). Since the difficulty to reconstruct the originally identified 11-factor structure was acknowledged by Raven *et al.* (1998), we first used an EFA procedure to explore the scale's factor structure. Results yielded four statistically significant factors: the first factor refers to harsh powerbases ( $\alpha = 0.90$ ), indicating the tendency to employ coercive powerbases emphasizing the leader's authority and, therefore, his/her ability to demand subordination, to reinforce and to punish (Erchul *et al.*, 2001). The other three factors refer to soft powerbases: expertise and personal reward ( $\alpha = 0.82$ ) indicating the leader's tendency to emphasize his/her professional superiority as an expert and the use of contingent reinforcements; information and legitimacy of dependence ( $\alpha = 0.78$ ) indicating the leader's tendency to use rational-based arguments and to emphasize his/her dependence on his subordinates as means to influence them; referent ( $\alpha = 0.80$ ) reflecting subordinates' willingness to obey following the high appreciation they have for their leader. A CFA procedure confirmed the hypothesized four-factor model as all fit indexes (CFI = 0.902, GFI = 0.920; RMSEA = 0.071) met the recommended criteria

(Bagozzi *et al.*, 1991; Brown, 2006; Mueller, 1996). Raven *et al.* (1998) maintained that some overlapping among powerbases is reasonable. Therefore, structural reliability will be maintained as long as the meta-structure differentiation between soft and harsh powerbases is supported (Raven *et al.*, 1998, p. 232), as indicated by the factorial solution obtained in the current study.

*School effectiveness.* Based on the theoretical assumption arguing that the use of powerbases mediates the effect of leadership style on school outcomes and bearing in mind the criteria set by Baron and Kenny (1986) and Kenny *et al.* (1998) for mediation, the following mediation model (see Figure 1) is employed.

**Results**

*Aggregation analysis*

In line with our research hypotheses, all data analysis procedures use the school as the unit of analysis. To meet this end, Intra Class Correlations (ICC2) are computed for the leadership and use of powerbases variables. ICC2 is found to be >0.25 for all variables meeting the recommended criteria (Bliese, 2000; Bryk and Raundebush, 1992; Hox, 2010; McGraw and Wong, 1996).

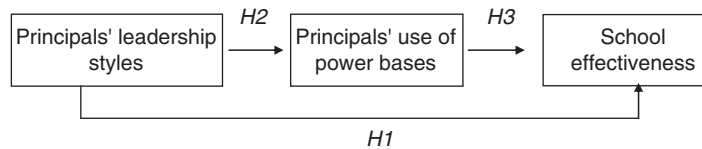
*Hypotheses testing*

Initially, means, standard deviations and correlations between all research variables were computed. Results are presented in Table I.

In line with *H1*, it is evident that principals' transformational leadership style is more strongly related to school outcomes ( $r = 0.52$ ;  $p < 0.001$ ) than transactional leadership ( $r = 0.22$ ;  $p < 0.05$ ) while the passive leadership style is negatively related to school outcomes ( $r = -0.47$ ;  $p < 0.01$ ).

When looking at the relation between leadership style and use of powerbases, it is evident that transformational leadership is positively related to the use of all three soft

**Figure 1.**  
The research model



	Mean	SD	1	2	3	4	5	6	7
1. TL	5.38	0.96							
2. PAS	3.64	1.23	-0.73***						
3. TA	3.81	0.84	-0.47**	0.11					
4. HPB	1.91	1.07	-0.77***	0.39**	0.18				
5. EPR	3.03	1.09	0.41**	-0.37**	0.14	-0.33**			
6. ILD	4.14	0.79	0.15	0.06	0.09	-0.26**	0.19*		
7. Referent	4.74	1.07	0.58***	0.11	-0.14	-0.32**	0.43**	0.21*	
8. Math × SES	491.76	148.21	0.52***	-0.47**	0.22*	-0.35**	0.49**	0.17	0.45**

**Table I.**  
School principals' leadership styles, use of powerbases and schools' effectiveness: means, standard deviations and correlations

**Notes:**  $n = 191$ . TL, transformational leadership; PAS, passive leadership; TA, transactional leadership; HPB, harsh powerbases; EPR, expertise and personal reward; ILD, information and legitimacy of dependence. Scale range: 1 = never; 7 = always (for Variables 1-7) 10-1,000 (for Variable 8). \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

powerbases although statistical significance is obtained only for expertise ( $r = 0.41$ ;  $p < 0.01$ ) and referent powerbases ( $r = 0.58$ ;  $p < 0.001$ ). In line with *H2*, it is also evident that transformational leadership is negatively related to the use of harsh powerbases ( $r = -0.77$ ;  $p < 0.001$ ). These findings are in line with previously reported findings arguing that the use of soft powerbases will typically characterize transformational leaders (Bindu and Narendra, 2008; Deluga and Souza, 1991).

At the same time, however, the results also testify to a less expected positive correlation obtained between the passive leadership style and the use of harsh powerbases ( $r = 0.39$ ;  $p < 0.01$ ). Although this finding is less anticipated, it may still indicate passive leaders' tendency to enforce a climate which does not encourage organizational members to proactively peruse new initiatives.

Following our research model arguing that powerbases will mediate the relation between school principals' leadership styles and school effectiveness, Table I also testifies to the relation between the mediators and the dependent variable. Findings show that the expertise and personal reward ( $r = 0.49$ ;  $p < 0.01$ ) and referent ( $r = 0.45$ ;  $p < 0.01$ ) powerbases are positively related to school effectiveness while harsh powerbases are negatively related to school effectiveness ( $r = -0.35$ ;  $p < 0.01$ ). These findings are in line with the literature discussing the relation between various powerbases and effectiveness in various organizational contexts (for a review, see Koslowsky and Schwarzwald, 2001; Pierro *et al.*, 2006) and in the educational realm (Short and Rinehart, 1992; Stimson and Appelbaum, 1988).

Based on the claim arguing that leaders' utilization of powerbases may have a significant effect on organizational effectiveness (Bindu and Narendra, 2008; Miller and Rowan, 2006), a comparison between effective and ineffective schools was performed. Effective schools are those characterized by SES scores that are lower than the median and mathematics test scores that are higher than the median, whereas ineffective schools are those characterized by SES scores that are higher than the median and mathematics test scores that are lower than the median. The results of the comparison and effect size ( $\eta^2$ ) are presented in Table II.

In line with our research hypotheses, these findings indicate that leadership styles and powerbases differentiate between effective and ineffective schools. This appears to be true specifically for the transformational and passive leadership styles and for the harsh, expertise, personal reward and referent powerbases. Moreover, the findings

	<i>F</i>	df	$\eta^2$
<i>Leadership styles</i>			
TL	57.21***	1	0.36
PAS	45.35***	1	0.31
TA	12.81	1	0.09
<i>Powerbases</i>			
HPB	29.56**	1	0.27
ILD	9.09	1	0.07
EPR	48.55***	1	0.34
Referent	38.20***	1	0.26

**Notes:** TL, transformational leadership; PAS, passive leadership; TA, transactional leadership; HPB, harsh power bases; EPR, expertise and personal reward; ILD, information and legitimacy of dependence. \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

**Table II.** Leadership styles and powerbases: a comparison between highly effective ( $n = 48$ ) and highly ineffective schools ( $n = 46$ )



show that the transactional leadership style and the information and legitimacy of dependence powerbases do not differentiate between the groups.

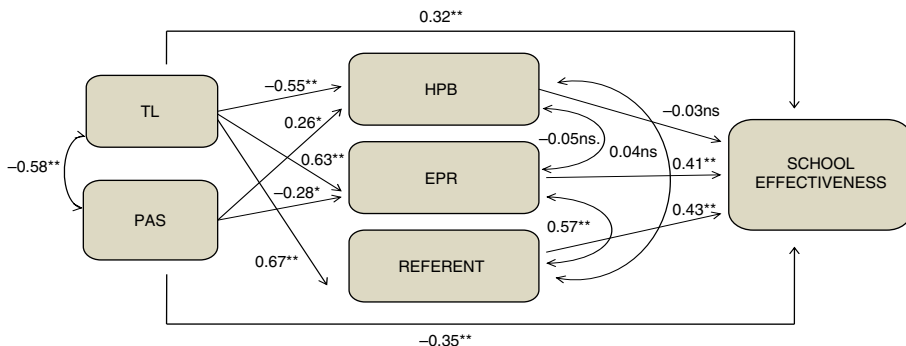
Based on these results, on the correlations found between leadership styles, powerbases and school effectiveness measures and in line with the criteria suggested for mediating variables by Baron and Kenny (1986) and others (Ayman, 2004; Dionne *et al.*, 2002; Kenny *et al.*, 1998; Shadish and Sweeney, 1991), several possible mediation paths were integrated into the theoretical model.

The theoretical model was then estimated so as to examine the relevant hypothesized relationships between the independent variables (i.e. transformational and passive leadership styles), the dependent variable (i.e. school effectiveness) and the mediators (i.e. harsh, expertise/personal and referent powerbases). To this end, the statistical package Mplus 6.11 (Muthén and Muthén, 2010) and the estimator MLR (maximum likelihood with robust estimates of the SD) were adopted. The results are shown in Figure 2.

The analysis suggests that the theoretical model fits the data well as four fit indexes met the recommended criteria (CFI = 0.914; TLI = 0.90; SRMR = 0.077; RMSEA = 0.061) (Bagozzi *et al.*, 1991; Brown, 2006; Mueller, 1996).

The results of the analysis presented in Figure 2 testify to both the direct paths between the predictor and the outcome and the mediation effect. The Delta test (MacKinnon, 2008) indicated the mediation effect. This was followed by a bootstrap procedure (5,000 draws) involving a repeated random sampling of observations with replacements from the data set to obtain better estimates of the standard errors. The results show that the model explains 57 percent of the schools' effectiveness. It is evident that TL significantly predicts school effectiveness both directly ( $\beta = 0.32$ ,  $p = 0.009$ ) and indirectly, via referent and EPR powerbases using a 95 percent confidence level, 95 percent CI (18.88, 67.21; 16.70, 51.25, respectively). To this end it can be concluded that these two powerbases partially mediate the relationship between TL and school effectiveness. These findings are in line with previously reported evidence discussing the various factors mediating the relation between school leadership and school effectiveness (Leithwood *et al.*, 2010).

Passive leadership negatively predicts school effectiveness, both directly ( $\beta = -0.35$ ,  $p = 0.002$ ) and indirectly, via the EPR powerbase using a 95 percent confidence level, 95 percent CI (-27.35, -2.22). This finding strengthens previously reported data suggesting a negative correlation between passive leadership and school



**Figure 2.**  
The path model results

**Notes:** TL, transformational leadership; PAS, passive leadership; HPB, harsh powerbases; EPR, expertise and personal reward. \* $p < 0.05$ ; \*\* $p < 0.01$

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effectiveness (Korland *et al.*, 2010). Moreover, it indicates that the expertise and personal reward powerbases moderate to some extent the negative effect passive leadership has on school effectiveness.

The last findings show that powerbases are in fact a mechanism through which school leaders influence school effectiveness. Moreover, the findings obtained suggest that although harsh powerbases seem to differentiate between effective and ineffective schools, these powerbases are not likely to serve school leaders intending to promote their school effectiveness regardless of their leadership style.

### Discussion

In accordance with the school leadership literature in the last decade, the point of departure for the current study is that the relation between school principals' leadership style and school performance and outcomes is indirect and mediated by a variety of organizational variables (Leithwood *et al.*, 2010; Leithwood and Jantzi, 2008; Witziers *et al.*, 2003). While leadership style is widely recognized as a critical factor in determining school outcomes and effectiveness (Dumay, 2009; Oplatka, 2009), there still exists considerable ambiguity regarding the mechanisms responsible for this relation (Crum *et al.*, 2009). The current study attempts to shed new light arguing that the utilization of powerbases is a significant mediating component in the relation between school principals' leadership style and school outcomes.

Three main findings rise from this present research: the first and most salient one is that the utilization of expertise, personal reward and referent powerbases partially mediate the relation between the transformational leadership style and school effectiveness, while the expertise and personal reward powerbases partially mediate the negative relation found between passive leadership and school effectiveness. The meaning of these findings is twofold: initially, they suggest that principals' use of powerbases is a significant component of the mechanism connecting school leaders' conduct and school outcomes. This finding is of value considering the number of research endeavors which attempted to shed more light on the qualities of this mechanism (Leithwood *et al.*, 2010; Leithwood and Jantzi, 2008; Witziers *et al.*, 2003).

Second, the results indicating that powerbase utilization significantly contributes to school effectiveness in addition to school principals' leadership style reinforce the notion that leadership styles are distinct from powerbases and therefore, should not be considered interchangeably (Stogdill, 1974, p. 292). Moreover, the finding indicating that the expertise and personal reward powerbases moderate the negative effect of passive leadership on school performance also manifests this distinction, reflecting that contrary to earlier claims (Deluga and Souza, 1991; Hunt, 1984), soft powerbases may also serve other leadership styles than the transformational.

Our findings also imply that transformational leadership that is mainly based on pedagogically oriented authority is essential for the promotion of school effectiveness. Transformational school leaders are usually charismatic individuals who present a clear vision. They serve as role model for their teachers and tend to empower and challenge them as means to increase their identification and commitment (Leithwood, 1994, 1995). While these qualities are highly significant, they do not emphasize crucial instructional aspects of school leadership (for a comprehensive review, see Marks and Printy, 2003). Among these qualities is the school principal's pedagogical expertise (Hallinger, 1992; Hallinger and Leithwood, 1998; Murphy, 1990). Instructional school leaders who typically demonstrate a high pedagogical orientation are responsible for initiating all activities intended to support students' outcomes and developing

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teachers' professional qualifications required for the promotion of students' learning (Sebring and Bryk, 2000). Our finding indicating that the expertise and personal reward as well as the referent powerbases partially mediate the relation between transformational leadership and school effectiveness suggests that a blend of transformational and pedagogical qualities and qualifications may promote school effectiveness the most. This conclusion is in line with Marks and Printy's work (2003) on instructional school leadership, arguing that school principals' pedagogical authority and qualifications as head teachers are equally important to their charisma.

Another interesting finding may be found in the positive correlation obtained between passive leadership and the use of harsh powerbases. Nevertheless, this finding may also indicate passive leaders' tendency to employ harsh powerbases as a means to maintain existing patterns of performance and avoid organizational members to proactively pursue new initiatives. These findings correspond with previous literature (Bindu and Narendra, 2008; Schwarzwald *et al.*, 2001), but also provide further justification for the current study as they indicate that the choice of various powerbases by school leaders characterized by different leadership styles may not be considered a simple and straightforward reduction.

Finally, the non-significance of transactional leadership for the distinction between effective and ineffective schools is rather a surprising finding obtained in the current study. This may be related to the degree of activism characterizing the transactional style, which is relatively unclear (Eyal, 2000) compared to the high activism characterizing the transformational leadership style and the low activism characterizing passive leadership (Bass, 1990). This argument may be better explained in considering that transactional leaders are mostly involved in maintaining current patterns and modes of operation. In this sense, they are neither active nor passive and their contribution to school effectiveness may therefore be less evident and obvious (Eyal, 2000; Korland *et al.*, 2010).

The theoretical contribution of this study is twofold: initially, it reinforces the distinction between leadership style and leaders' use of powerbases, a distinction which seems to be underdeveloped in the leadership literature (Bass and Bass, 2008; Pierro *et al.*, 2008). Second, it testifies to the qualities of the mechanism that school leaders use (or misuse) while pursuing school effectiveness.

Practically, two main implications emerge: the placement of school leaders should emphasize both transformational and pedagogical qualifications in considering the significance of the EPR powerbase found in the current study and its significance in diminishing the negative effect of passive leadership on school effectiveness. This means that the selection of individuals for school leadership positions should emphasize their pedagogical knowledge and abilities in addition to their interpersonal qualifications and charisma. Previous experience as teachers should be a prerequisite if they are expected to become effective head teachers.

Second, our findings suggest that school principals should avoid using sanctions and threats, whether direct or indirect, since the utilization of harsh powerbases is not likely to result with school effectiveness. Instead, they need to rely more on their pedagogical expertise and present a clear organizational vision while manifesting high interpersonal qualifications.

While the findings obtained in the current study seem to have theoretical and practical implications, it is not free of limitations. It is important to acknowledge that the choice of social powerbases and the way their utilization is perceived is sensitive to social and cultural settings (Hofstede, 1993). Hence, conducting similar studies in other cultural and social settings is likely to shed additional light on the cultural implications

associated with the utilization of specific powerbases as mediators between the leadership style of principals and school outcomes.

In considering that the stress on achievement increases with time, reaching a peak close to graduation, the use of powerbases in high schools may take on a different pattern compared to the patterns found in elementary schools. It is suggested for this reason that further research focus on the use and significance of powerbases in high schools.

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