

# School Leadership – International Perspectives

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# STUDIES IN EDUCATIONAL LEADERSHIP

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## Chapter 4

# School Leadership Effectiveness: The Growing Insight in the Importance of School Leadership for the Quality and Development of Schools and Their Pupils

Stephan Gerhard Huber and Daniel Muijs

**Abstract** Leadership has long been seen as a key factor in organisational effectiveness, and the interest in educational leadership has increased over recent decades. This is due to a number of reasons, often related to changes to the education system, such as the growth of school-based management in many countries over the past two decades, which has meant more influence for the school and therefore a greater role for the school manager, as powers and responsibilities have been delegated or even devolved from national, regional, or local levels to the school. This has inevitably led to a growth in the importance of the school leader and his/her individual role, and therefore to a greater interest in leadership as a key factor in school effectiveness and improvement.

The chapter looks at the state of the art regarding the knowledge about the role of school leadership for the quality and development of schools and the achievement of their pupils. First, a brief summary of findings of school effectiveness and school improvement research is given, highlighting the pivotal role of school leadership. Then, a hint at the interest in learning from the private sector as a contributing factor in the blossoming of leadership in education among policy makers and researchers is made. The main part of the chapter focuses on the growing body of literature dealing with the effectiveness of school leadership as represented in meta-studies and literature reviews of school leader effectiveness. Four main perspectives are distinguished. Then, three models (direct-effects models, mediated-effects models and reciprocal-effects models) are presented to classify studies on administrator effects. Examples of reviews to this topic are named, and some of them are presented briefly. Finally, lessons learnt from the review are provided and discussed. Effective leadership can be expected to be a factor that helps create the conditions under which teachers can be optimally effective, which in turn would result in higher levels of pupil performance. It is concluded that the question which should be asked is no longer whether principals do make a difference but more particularly which

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means they apply and through which paths they achieve such effects. Limitations, such as the tendency to jump rapidly from a limited research base to prescriptions for practice, a strong reliance on dualistic models in the field, an overreliance on change metaphors in research on educational leadership and deficiencies in research methods are discussed and a point is made for more rigorous quantitative and qualitative research and better “fits” of theories, empirical research and experienced practice.

## **School Leadership and School Effectiveness**

The pivotal role of the school leaders as a factor in effective schools has been corroborated by findings of school effectiveness research. Extensive empirical efforts of quantitatively oriented school effectiveness research – mostly in North America, Great Britain, Australia and New Zealand, but also in the Netherlands and in the Scandinavian countries – have shown that leadership is a central factor in school quality (see, for example, in Great Britain: Reynolds, 1976; Rutter et al., 1979; Mortimore et al., 1988; Sammons et al., 1995; in the USA: Brookover et al., 1979; Edmonds, 1979; Levine & Lezotte, 1990; Teddlie & Stringfield, 1993; in the Netherlands: Creemers, 1994; Scheerens & Bosker, 1997; Huber, 1999a, offers a critical overview). The research results show that schools classified as successful possess a competent and sound school leadership. The central importance of educational leadership is therefore one of the clearest messages of school effectiveness research (Gray, 1990). In most of the lists of key factors (or correlates) that school effectiveness research has compiled, ‘leadership’ plays such an important part that the line of argument starting with the message ‘schools matter, schools do make a difference’ may legitimately be continued: ‘school leaders matter, they are educationally significant, school leaders do make a difference’ (Huber, 1997) to pupils’ achievement. Leadership is described in these studies as firm and purposeful, sharing leadership responsibilities, providing decisive and goal-oriented participation of others in leadership tasks, so that there is a real empowerment in terms of true delegation of leadership power (distributed leadership) and that there is a dedicated interest in and knowledge about what happens during lessons in the classroom.

In most cases, outcomes have, as is common (though not necessarily sufficient) in school effectiveness research, been defined as student learning outcomes and more specifically as test results. Attempts have been made to connect leadership (usually defined as headteacher or principal leadership) with outcomes, usually using a regression (or multilevel) model where different variables are regressed on pupil achievement. Many studies have found leadership to be a key characteristic of effectiveness. Brookover (1979), in one of the earlier school effectiveness studies, for example, reports that principals of effective schools are strong leaders. Other researchers in school effectiveness, too, have found relationships between

school effectiveness outcomes (usually at the pupil level) and variables such as principals developing a clear shared mission and developing a focus on learning and teaching in the school (Teddle & Stringfield, 1993; Levine & Lezotte, 1990) and strong purposeful leadership by the headteacher (Mortimore et al., 1988; Sammons et al., 1995). Cheng (2002) found modest positive correlations between principal leadership and student attitudes towards school.

## **School Leadership and School Improvement**

Studies on school development and improvement have also emphasised the importance of school leaders, especially from the perspective of the continuous improvement process targeted at an individual school (see van Velzen, 1979, 1985; Stegö et al., 1987; Dalin et al., 1990; Joyce, 1991; Caldwell & Spinks, 1992; Huberman, 1992; Leithwood, 1992; Bolam, 1993; Bolam et al., 1993; Fullan, 1991, 1992, 1993; Hopkins et al., 1994, 1996; Reynolds et al., 1996; Altrichter & Posch, 1998; Huber, 1999b offers a critical overview). In many countries, the efforts made to improve schools have illustrated that neither top-down measures alone nor the exclusive use of bottom-up approaches have the effects desired. Instead, a combination and systematic synchronisation of both have proved most effective. Moreover, improvement is viewed as a continuous process with different phases, which follow their individual rules. Innovations also need to be institutionalised after their initiation and implementation at the individual school level, so that they will become a permanent part of the school's culture, that is, its structures, atmosphere and daily routines. Hence, the goal is to develop problem-solving, creative, self-renewing schools that have sometimes been described as learning organisations. Therefore, the emphasis is placed on the priorities to be chosen by each school individually, since it is the school that is the centre of the change process. Thereby, the core purpose of school, that is, education and instruction, is at the centre of attention, since the teaching and learning processes play a decisive role for pupils' success (Muijs & Reynolds, 2001). Hence, both the individual teacher and the school leadership are of great importance. They are the essential change agents who will have significant influence on whether a school will develop into a 'learning organisation' or not.

School leadership is considered vital for all phases of the school development process and is held responsible for keeping the school as a whole in mind and for adequately coordinating the individual activities during the improvement processes (for the decisive role of school leadership in the development of the individual school see, for example, studies conducted as early as in the 1980s by Leithwood & Montgomery, 1982; Hall & Hord, 1987; Trider & Leithwood, 1988). Furthermore, it is required to create the internal conditions necessary for the continuous development and increasing professionalisation of the teachers. It holds the responsibility for developing a cooperative school culture. Regarding this, Barth

(1990), Hargreaves, D.H. (1994) and Southworth (2003), among others, emphasise the 'modelling' function of the school leader.

## **Increased Focus on School Leadership**

An interest in transforming the public sector by learning from the business world contributed to this interest, as leadership was seen as one of the key elements that made private companies more effective than the public sector was perceived to be (e.g. Peters & Waterman, 1983). An interest in learning from the private sector, where leadership has long been seen as an important element in business performance, was therefore a contributing factor in the blossoming of leadership in education. This interest in leadership among policy makers and researchers is backed by a great deal of rhetoric about the importance of leadership in schools. In several countries government leaders have stressed the importance of school leadership. This political rhetoric has sometimes been matched by an increased investment in leadership development, with moves towards participation in leadership development and required certification for heads and principals. The most ambitious of these efforts to provide and coordinate development programmes is probably the National College for School Leadership in England, set up in 2001 by the government, pointing to a belief that leadership can be learned at least to some extent and that leadership development is the vehicle by which to do this. Again, certification in other countries would seem to suggest this belief is widely shared, and it is common at present for greater attention to be paid to leadership development than to selection procedures.

## **Meta-Studies and Literature Reviews of School Leader Effectiveness**

There is a growing body of literature dealing with the effectiveness of school leadership and if and how school leadership contributes to organisational effectiveness as well as to teacher and pupil achievement.

Four main perspectives are represented:

- (i) Literature which takes a rather theoretical perspective into account, dealing, for example, with questions around what kind of leadership concepts and styles reflect leadership practice.
- (ii) Literature which takes a rather prescriptive perspective, dealing with what kind of leadership should be practiced.
- (iii) Literature which takes an empirical perspective, investigating on the one hand leadership practices within a qualitative paradigm in order to understand leadership contexts, refine theory or develop assumptions which can be tested or

on the other hand within a quantitative paradigm in order to test a hypothesis and to generalise findings from a sample to a larger population.

- (iv) Literature which takes a methodological perspective, for example, discussing research designs, methods of data gathering or methods of data analysis, since more enhancements in the respective technology allows for more refined ways of dealing with data to answer more complex research questions and assumptions.

Of particular interest is pupil output/outcome, which most often is operationalised neither as pupil satisfaction nor as pupils' attributes and attitudes or pupils' behaviour in general, but as pupils' cognitive test results reflecting pupils' cognitive abilities/achievements.

Obviously, this expenditure and emphasis begs the question of whether school leadership really is such a decisive factor in school performance. Research would certainly suggest that it is a factor that can impact on outcomes. The work most often cited to this effect is Hallinger and Heck's (1998) review which suggests a link between leadership and school effectiveness, albeit the link is indirect and one that is mediated by the effectiveness of staff.

In their literature review, Hallinger & Heck (1998) adapted Pitner's (1988) framework to identify 'approaches that could be used to study administrator effects through non-experimental research methods' (p. 162) in order to classify studies on these effects:

1. Direct-effects models: these models suggest that leaders' practices can have direct effects on school outcomes and that these effects can be measured reliably apart from other related variables (such as organisational culture, teacher commitment, instructional organisation). Hence, researchers do not typically seek to control for such effects. In case any variables (such as the socioeconomic background) were recognised to have a prior effect on school outcomes, these variables were included, but not regarded as interacting variables or mediating leadership's effects on the student outcomes. These models were quite common in studies prior to around 1987. Criticism of them emphasised that in these studies, the process by which administrators influence school effectiveness is hidden in a 'black box': It is stated that there is an empirically tested relationship, but little is revealed about how leadership operates.
2. Mediated-effects models: these models are based on the assumption that leaders achieve effects on school outcomes indirectly. What they contribute is always mediated by other people, by events beyond leadership action and by organisational factors (examples given are teacher commitment, instructional practices and school culture). These models are often enlarged by adding antecedent variables, which results in an even more consistent pattern of indirect effects of leadership on school effectiveness.
3. Reciprocal-effects models: these models are based on the idea of interactive relationships between the leader and aspects of the school and its environment. 'Principals enact leadership in the school through a stream of interactions over



a period of time' (p. 168). In doing so leaders address relevant features, change them and actual change which takes place causes reciprocal effects on their leadership again. Thus, they adapt to the organisation and change their thinking and behaviour over time. As these models demand a very complex design, only few studies were conducted based on this model type.

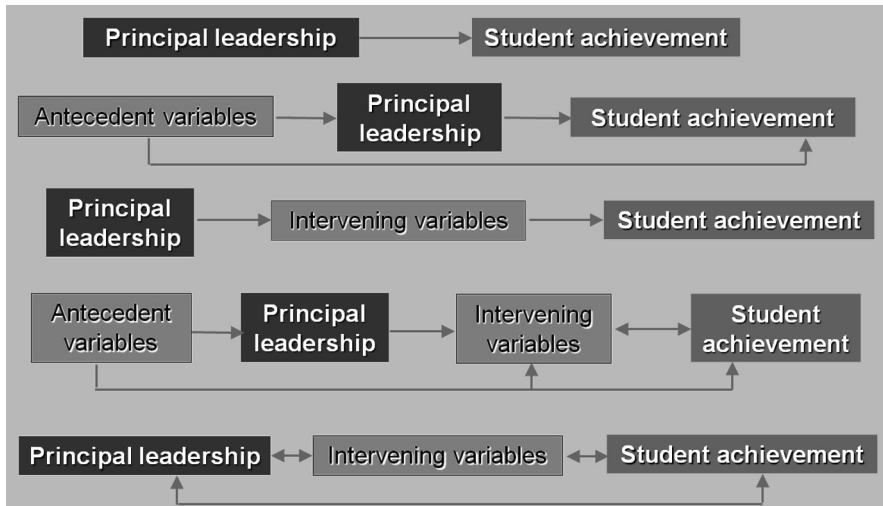


Fig. 4.1 Different measurement models

## Reviews to This Topic

Reviews to this topic are, to give some examples:

- Hallinger, P. & Heck, R.H. (1998). Exploring the principals' contribution to school effectiveness: 1989–1995. *School Effectiveness and School Improvement*, 9(2), pp. 157–191.
- Bell, L., Bolam, R., & Cubillo, L. (2003).
- Leithwood, K.A. & Riehl, C. (2003). What do we already know about successful school leadership? AERA Paper Task Force on Developing Research in Educational Leadership.
- Witziers, B., Bosker, R., & Kruger, M. (2003). Educational leadership and student achievement: The elusive search for an association. *Educational Administration Quarterly*, 39(3), 398–425.
- Leithwood, K., Louis, K.S., Anderson, S., & Wahlstrom, K. (2004). Review of research: How leadership influences student learning. Wallace Foundation. Downloaded from <http://www.wallacefoundation.org/NR/rdonlyres/E3BCCFA5-A88B-45D3-8E27-973732283C9/0/ReviewofResearchLearningFromLeadership.pdf> on December 19, 2007.

- Marzano, R.J., McNulty, B.A. & Waters, T. (2005) *School Leadership that Works: From Research to Results*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Leithwood, K., Day, C., Sammons, P., Harris, A., & Hopkins, D. (2007). Seven strong claims about successful school leadership.
- Robinson, V.M.J. (2007). The impact of leadership on student outcomes: Making sense of the evidence. *The Leadership Challenge: Improving Learning in Schools*.

Some of them will be presented briefly:

### **Hallinger, P. & Heck, R.H. (1998). Exploring the Principals' Contribution to School Effectiveness**

Hallinger & Heck (1998) present a framework for exploring leadership effects and grouping leadership effectiveness studies, comprising four areas through which leadership may influence the organisational system (pp. 171–178):

1. Purposes and goals: most findings emphasise an indirect influence on school outcome through 'principal's involvement in framing, conveying and sustaining the schools purposes and goals' (p. 171) (see e.g. Andrews & Soder, 1987; Bamburg & Andrews, 1991; Brewer, 1993; Cheng, 1994; Goldring & Pasternak, 1994; Hallinger et al., 1996; Hallinger & Murphy, 1985; Heck, 1993; Heck et al., 1990; Leithwood, 1994; Leithwood et al., 1993; Scott & Teddlie, 1987; Silins, 1994), taking into consideration that goal setting is conceptualised differently within the specific leadership models, e.g. instructional leadership or transformational leadership.
2. Structure and social networks: the interplay between organisational structure and social networks is another area of leadership influence on organisational performance (see e.g. Cheng, 1994; Goldring & Pasternak, 1994; Heck, 1993; Heck et al., 1990; Leithwood, 1994; Leithwood et al., 1993; Ogawa & Bossert, 1995; Silins, 1994; Weil et al., 1984). To give an example according to Leithwood et al. (1993) and Leithwood (1994), the 'areas of transformational leadership that primarily affect this domain are providing support for individual teachers, fostering cooperation and assisting them to work together toward the fulfilment of identified school goals' (p. 174).
3. People: leadership activities are directed at and affect people as a means to achieve positive outcomes indirectly using personal resources, e.g. responsibility, cooperation, commitment (see, e.g. Bossert et al., 1982; Heck et al., 1990; Leithwood, 1994; Ogawa & Bossert, 1995). Leithwood (1994) 'highlights 'people effects' as a cornerstone of the transformational leadership model' (p. 175). Studies using an instructive leadership model also support the effect that principals have on people as the major means to affect outcomes indirectly (see, e.g. Heck et al., 1990).

4. Organisational culture: the influence of organisational culture on the meaning people associate with their work is emphasised by, e.g. Heck et al. (1990), Leithwood et al. (1993), Ogawa & Bossert (1995), Weil et al. (1984). Ogawa & Bossert (1995) argue that ‘leaders operate within environmental (i.e. societal) and organisational cultures and affect how other participants interpret organisational events and thus influence how they behave’ (p. 176). Climate seems to be the older term (used in the 1980s) for what is later called culture including learning, organisational and social climate. Leithwood et al. (1993) conceptualised school culture as ‘widespread agreement about norms, beliefs and values. They proposed that school culture was central to achieving the coordination necessary to implement change’ (p. 177). Hallinger and Heck (1998) conclude: ‘principals exercise a measurable though indirect effect on school effectiveness and student achievement’ (p. 186), yet findings do not resolve the issue how principals ‘achieve an impact on school outcomes as well as the interplay with contextual forces that influence the exercise of school leadership’ (p. 186). Consequently, the question is no longer ‘do principals make a difference’, but more particularly ‘what are the paths through which such effects are achieved’.

### **Leithwood, K. A., Riehl, C. (2003). What Do We Already Know About Successful School Leadership?**

Sources for the meta-study by Leithwood & Riehl (2003) were quantitative research studies published in refereed academic journals which fulfilled methodological standards and published or publishable multiple case studies or systematic single case studies supporting or explicitly not supporting evidence from other sources. The authors state that student characteristics have the strongest effects on student achievement (including intellectual ability, motivation and socio-economic status. Then classroom characteristics matter (including teachers’ pedagogical techniques/active teaching strategies, e.g. staff development activities). School leadership explains 3–5% of the variation of student achievement, but about one-quarter of the variation explained by school factors in total. ‘Leadership effects are primarily indirect, and they appear primarily to work through the organisational variable of school mission or goals and through variables related to classroom curriculum and instruction. While quantitative estimates of effects are not always available, leadership variables seem to explain an important proportion of the school-related variance in student achievement.’ (p. 13)

Leithwood & Riehl formulate ‘six defensible claims about school leadership’ (p. 9):

1. Successful school leadership makes important contributions to the improvement of student learning (pp. 10–13).
2. The primary sources of successful leadership in schools are principals and teachers (pp. 13–15).

3. In addition to principals and teachers, leadership is and ought to be distributed to others in the school and school community (pp. 15–16).
4. A core set of ‘basic’ leadership practices are valuable in almost all contexts:
  - setting directions (pp. 17–19)
    - identifying and articulating a vision
    - fostering the acceptance of group goals
    - creating high-performance expectations
  - developing people (pp. 19–20)
    - offering intellectual stimulation
    - providing individualised support
    - providing an appropriate model
  - redesigning the organisation (pp. 20–21)
    - strengthening school cultures
    - modifying organisational structures
    - building collaborative processes
5. In addition to engaging in a core set of leadership practices, successful leaders must act in ways that acknowledge the accountability-oriented policy context in which almost all work (pp. 21–24):
  - market accountability: creating and sustaining a competitive school
  - decentralisation accountability: empowering others to make significant decisions
  - professional accountability: providing instructional leadership
  - management accountability: developing and executing strategic plans
6. Many successful leaders in schools serving highly diverse student populations enact practices to promote school quality, equity and social justice (pp. 24–36):
  - building powerful forms of teaching and learning
  - teacher expectations
  - class size
  - student grouping
  - curriculum and instruction
  - instructional programme coherence
  - teacher recruitment and retention
  - creating strong communities in school
  - nurturing the development of family’s educational cultures
  - parent education programmes
  - coordinated services
  - expanding the amount of students’ social capital valued by the schools

- increasing the proportion of children’s social capital valued by the school
- creating meaningful partnership with parents
- enacting antiracist practices in schools

Leithwood & Riehl conclude: ‘We know that school leadership is most successful when it is focused on goals related to teaching and learning, and that leadership can take different forms in different contexts. We understand some of the mechanisms through which educational leadership has its effects. There are still many gaps in our knowledge about effective educational leadership.’ (Leithwood & Riehl, 2003, p. 35).

### **Leithwood, Seashore Louis, Anderson and Wahlstrom (2004). How Leadership Influences Student Learning**

In their report for the Wallace Foundation, Leithwood, Seashore Louis, Anderson and Wahlstrom (2004) present a summarised review of the state of the art in leadership effectiveness research, identifying basics of successful leadership (p. 6) and going beyond the basics (p. 8). The authors come to conclusions about how successful leadership influences student learning (pp. 11–12): Mostly leaders contribute to student learning indirectly, through their influence on other people or features of their organisations. The evidence provides very good clues about whom or what educational leaders should pay the most attention to within their organisation. However, they also state the need to know much more about what leaders do to further develop those high-priority parts of their organisation.

### **Leithwood, K., Day, C., Sammons, P., Harris, A. Hopkins, D. (2007): Seven Strong Claims About Successful School Leadership**

In their review of literature in the context of large-scale studies based on a robust empirical evidence, Leithwood, Day, Sammons, Harris & Hopkins (2007) provide a synopsis resulting in ‘seven strong claims’:

1. School leadership is second only to classroom teaching as an influence on pupil learning. Leadership has significant effects on the quality of school organisation and on pupil learning (p. 1). For this, five sources of evidence are provided:
  - single qualitative case studies, which show large leadership effects, but lack in the evidence of external validity and generalisability;
  - large-scale studies of overall leadership effects to student outcome, which show that the combined direct and indirect effects of school leadership on pupil outcomes are small but educationally significant and that leadership explains only 5–7% of the difference in pupil learning and achievement across schools;

- large-scale studies of effects of specific leadership practices to student outcome (identifying 21 leadership responsibilities), which show that a 10 percentile point increase in pupil test scores would result from the work of an average headteacher who improved her demonstrated abilities in all 21 responsibilities;
  - research exploring leadership effects on pupil engagement showing that school engagement is a strong predictor of pupil achievement; 100 recent large-scale quantitative studies in Australia and North America have concluded that the effects of transformational school leadership on pupil engagement are significantly positive;
  - leadership succession research, from which can be concluded that unplanned headteacher succession is one of the most common sources of schools' failure to progress.
2. Almost all successful leaders draw on the same repertoire of basic leadership practice. Considering that the central task for leadership is to help improve employee performance, four sets of leadership qualities and practices in different contexts can be identified (p. 6):
- building vision and setting directions;
  - understanding and developing people;
  - redesigning the organisation;
  - managing the teaching and learning programme.
3. The ways in which leaders apply these leadership practices – not the practices themselves – demonstrate responsiveness to, rather than dictation by, the contexts in which they work (p. 8). This leads to contextually sensitive different practices of each of four core sets of successful leadership.
4. School leaders improve teaching and learning indirectly and most powerfully through their influence on staff motivation, commitment and working conditions (p. 10): While school leaders 'made modest direct contributions to staff capacities, they had quite strong and positive influences on staff members' motivations, commitment and beliefs about the supportiveness of their working conditions' (p. 10).
5. School leadership has a greater influence on schools and pupils when it is widely distributed (p. 12):
- Total leadership which involves the school leader, the vice-principal, the senior management team, the staff teams, the central office staff and students has a stronger impact on the teachers' perceptions of their working conditions, and a little bit smaller impact on the teachers' abilities and a small impact on the teachers' motivation and commitment.
  - Total leadership accounted for a quite significant 27% of the variation in student achievement across schools.

6. Some patterns of distribution are more effective than others (p.13):  
Schools with high achievement levels attributed this to relatively high levels of influence from all sources of leadership, while headteacher leadership was not decreased by distribution. According to theory, leadership patterns that reflect a great amount of coordination are more effective than uncoordinated ones. Yet, research on these assumptions in the educational sector is still missing.
7. A small handful of personal traits explain a high proportion of the variation in leadership effectiveness (p. 14). Most successful school leaders are open minded, ready to learn from others, flexible in their thinking, persistent (e.g. holding high expectation of staff motivation and commitment), resilient, and optimistic.

### **Robinson, V.M.J. (2007). The Impact of Leadership on student outcomes: making sense of the Evidence**

Robinson's (2007) meta-study reviews evidence about the links between leadership and student outcomes from 24 studies published between 1985 and 2006. The majority of studies were conducted in US schools (15). Two studies reviewed were conducted in Canada and only one in each of Australia, England, Hong Kong, Israel, Netherlands, New Zealand and Singapore. Fourteen studies examined leadership in elementary school contexts, three in high schools, and seven studies included a mix of elementary, middle and high schools. Thirteen of the studies confined their analysis of school leadership to the principal only, while 11 took a broader, more distributed view of leadership. While the studies examined the impact of leadership on a wide range of student outcomes, academic outcomes – notably maths, reading and language skills – predominated. The four studies that examined leadership impact on students' social and personal well-being included measures of attitudes to school, teachers and learning, as well as students' academic self-concept, engagement with their schooling and retention rates.

One central result gained in this study is that 'the closer leadership gets to the core business of teaching and learning, the more impact leaders have on valued student outcomes' (Tringham, 2007). This may be the reason why generic leadership competencies as propagated in transformational leadership only show a weak impact on student outcomes. The effect of instructional leadership is consistently and notably larger than the effect of transformational leadership.

Robinson (2007) identified the following set of five leadership practices with a powerful impact on pupils (see Tringham, 2007):

1. Establishing goals and expectations: this is apparent through leadership practices such as the setting, communication and monitoring of learning goals, standards and expectations and the involvement of staff and others in the process so that there is clarity and consensus about goals.

2. Strategic resourcing: this involves leadership practices like aligning resource selection and allocation to priority teaching goals; it also includes, e.g. the provision of appropriate expertise through staff recruitment.
3. Planning, coordinating and evaluating teaching and the curriculum: this is shown in leadership practices such as direct involvement in the support and evaluation of teaching through regular classroom visits and provision of formative and summative feedback to teachers; it includes direct oversight of curriculum through school-wide coordination across classes and year levels and alignment to school goals.
4. Promoting and participating in teacher learning and development: this dimension describes leadership that both promotes and directly participates with teachers in formal or informal professional learning.
5. Ensuring an orderly and supportive environment: this includes protecting time for teaching and learning by reducing external pressures and interruptions and establishing an orderly and supportive environment both inside and outside classrooms.

Looking ahead, Robinson suggests that leadership theory, research and practice needs to be more closely linked to research on effective teaching, so that there is greater focus on what leaders need to know and do to support teachers in using the pedagogical practices that raise achievement and reduce disparity.

## Other Studies and Reviews

A number of studies have specifically attempted to study the indirect impact of leadership. Both D'Agostino (2000) and Teddlie & Stringfield (1993), for example, report that leadership of the principal was the key factor in helping create a strong shared mission and vision in the school, which in turn was related to teacher effectiveness, a finding confirmed in Hallinger & Heck's (1998) review. Leithwood & Jantzi (1999) likewise found no direct effect of transformational leadership on student outcomes, but report an effect on school conditions. As D'Agostino (2000) points out, it would appear that effective schools are good at accumulating strong human resources by fostering cohesion and morale within the school and that the principal plays a key role in achieving this. A systematic review of eight studies conducted by the EPPI leadership review group, set up specifically to look at the impact of leadership in the UK (but drawing on research from a range of countries) on the impact of leadership on student outcomes likewise concluded that leadership can have an effect on student outcomes, albeit an indirect one. Key mediating factors found in these studies were the work of teachers, the organisation of the school and relations with parents (Bell et al., 2003). The evidence from the school improvement literature likewise highlights that effective leaders exercise an indirect influence on schools' capacity to improve and upon the achievement of students, though this influence does not necessarily derive from senior managers, but can also at least partly lie in strengths of middle-level leaders and teachers (Harris, 2004).



Whilst the quality of teaching most strongly influences levels of pupil motivation and achievement, it has been demonstrated that the quality of leadership matters in determining the motivation of teachers and the quality of teaching in the classroom (Fullan, 2001; Sergiovanni, 1999).

## Lessons Learnt from the Reviews

Generally, results support the belief that principals exercise a measurable though indirect effect on school effectiveness and student achievement. However, findings do not resolve the means by which principals achieve an impact on school outcomes and how contextual forces influence the exercise of leadership in school. Discrepancies are assumed to be due to context differences in school settings, variation in the principal's role, alternative theoretical models, methodological differences and analysis problems as well as the multilevel nature of schooling.

Hence, the question which should be asked is no longer whether or not principals do make a difference but, more particularly, which means they apply and through which paths they achieve such effects.

When we examine these studies more closely, it is clear that most leadership variables are only modestly to weakly related to outcomes (e.g. Hallinger & Heck, 1998; Van de Grift & Houtveen, 1999; D'Agostino, 2000), and in some studies, no relationships were found at all (see Creemers, 1994; Leitner, 1994). A meta-analysis covering a wide range of variables relating to student outcomes found that leadership had an average effect size of 0.52 (or half a standard deviation), which is higher than the average found for all educational interventions studies (0.4) (some of which had virtually no impact at all), but significantly lower than factors such as 'direct instruction', feedback to students or cognitive strategy training (Hattie, 2005). This is not surprising, in view of the fact that one would not expect leadership to impact directly on outcomes. Proximity models of effectiveness would predict that leadership was too distal from students' experiences to have a direct impact. This does not, however, mean that leadership is not an important variable. Rather, as suggested in, for example, the dynamic model of school effectiveness (Creemers & Kyriakides, 2004), we would expect effective leadership to be a factor that helps create the conditions under which teachers can be optimally effective, which in turn would result in higher levels of pupil performance. This is indeed what the reviews summarised above have found.

Overall, then, it can be said that the view that leadership matters, as espoused by policy makers in many countries, is supported by the literature, though to a far lesser extent than one might imagine from some of the rhetoric. The impact is indirect and modest rather than strong. Context is an important factor here, however, in that the influence of leadership at the school level is clearly stronger where school autonomy is greater. The Netherlands is a good example of this, where the impact of leadership in most studies has increased from non-significant to modest as policy changes have rendered the influence of the head greater (van de Grift & Houtveen, 1999).

## The Research Base and Its Limitations

We can therefore say that we know something about leadership and its contribution to organisational effectiveness. There is evidence that leadership does make a difference to organisational effectiveness and to pupil performance. There is some evidence that transformational and distributed leadership in particular can contribute to organisational effectiveness. However, what is equally clear is that the research base is far weaker than many of the claims made for these forms of leadership would suggest. There is a tendency, not just in leadership, but in educational research more generally, to jump rapidly from a limited research base to prescriptions for practice, as a result of pressures from governments and their agencies in search of ‘quick fixes’ and from schools in search of solutions to the need for fast improvement as a result of the accountability measures they are forced to work under. Commercial consultants and advocates of particular programmes or movements are often ready to offer such solutions, but also some higher education institutions do that, too. Hence, they hold their share of responsibility for this situation.

This tendency is exacerbated by the overreliance on dualistic models in the field, which invite prescription through their identification of one set of practices as ‘good’ and another set as ‘bad’. Again, this is not a tendency that is unique to research in the leadership field. Educational research generally suffers from this, as is evidenced in distinctions between ‘deep’ and ‘surface’ learning in higher education pedagogy (Biggs, 2003), distinctions between ‘progressive’ and ‘traditional’ methods of teaching, and of course the distinction between ‘effective’ and ‘ineffective’ schools (Reynolds et al., 2004). Moreover, it is clearly absurd to set up a duality in which management is distinct from and inferior to leadership. Management functions are integral to the running of organisations and are in practice hard to separate from leadership. Indeed, some researchers have correctly pointed out that much of what is now termed leadership was in the past termed management, or before that, administration (Gunter, 2001). It is clear that if we are to move the field on we will have to go beyond this tendency to set up a dualism, pick one part as being ‘good’ and then recommend this as the way forward for practice. Classification is a necessity for science to progress, but a more refined understanding of the contextual and situational leadership and management may be more illuminating and less prone to simplistic prescriptions.

As well as a strong reliance of dualism, there is an overreliance on change metaphors in research on educational leadership. This again results in part from the stress on leadership at the expense of management, where leadership is seen as concerned with change and transformation, while management is about maintenance functions in an organisation. The conception that leadership is the key therefore leads to a pre-occupation with change among authors in the field and among leaders themselves. Of course, managing change, and, where necessary, instigating change are important, and in the increasingly unstable and fast-moving environment in which schools operate is probably more so than ever (Fullan, 1996). However, the emphasis on change, both in the literature (e.g. Kotter, 2000) and in the development programmes for headteachers, has led to a situation where every new head feels

he/she has to make changes whether they are necessary or not, purely to demonstrate leadership.

In our own research we have seen many instances of highly successful schools suffering where new leadership made wide-ranging changes to effective schools for reasons that did not stand up to scrutiny and that could in the end be described simply as a desire to change. Educational policy making seems similarly afflicted, with a rapid turnover of policies and initiatives seen as necessary to demonstrate this warped view of leadership. Again, we end up with the problematic nature of dualistic views of leadership.

That the research base is not as strong as one might expect reflects not just a dearth of research compared to prescription, but also deficiencies in research methods. There is a strong overreliance of self-report in leadership studies, where the most common form of research design is either a survey or interviews, usually of a limited number of school leaders. Studies are almost always post hoc, trying to work backwards with a retrospective view on the research object. This practice is clearly limited. Both survey- and interview-based methodologies, while highly useful, have, when used as the sole means of data collection, some severe limitations. Post hoc interviews are heavily prone to attributional bias (the tendency to attribute to ourselves positive outcomes, while negative outcomes are externally attributed, Weiner, 1980), as well as to self-presentation bias and interviewer expectancy effects (the tendency to give those answers we feel the interviewer wants to hear). Where leaders have received leadership development, there is an increasing tendency to hear the theories learnt on leadership courses repeated in interview situations. Survey questionnaires are likewise limited, especially where they are cross-sectional, as only correlational data can be collected. The issues of expectancy effects and bias exist here as well, as does attributional bias. In one survey study, for example, respondents tended to describe themselves as transformational leaders, while their line managers were described as using transactional leadership styles (Muijs et al., 2006).

These limitations mean it is often hard to make strong statements either about impact or about processes. The quantitative methodologies used need more often to be longitudinal and to make more use of quasi-experimental designs, and even of field trials of new leadership methods.

Moreover, there is the need to gather data not only from the school leaders but also from teachers and others (to add additional views from an external perception to the self-reports from a self-perception). Additionally, observations, although cost-intensive and not easy to implement as they most often intervene with the day-to-day practice which should be observed, might help to move to multi-perspectivity and triangulation.

Qualitative approaches likewise need to be more multi-perspective and longitudinal. They need to employ methods and instruments that allow more in-depth interrogation of processes such as ethnographic studies and genuine long-term case studies as well as the methods currently used.

Obviously, feasibility is also restricting research (of us and of our colleagues) and therefore the research designs should have the appropriate funding to provide better conditions for feasibility. Therefore the funding for research is an important

aspect, too. There is a need to have big enough research grants, which allow cooperative research arrangements to develop more sophisticated multi-perspective and longitudinal designs.

Interestingly, even if some discussion has been started about combining quantitative and qualitative methods, integrating them in a mixed-methods research design, with differences in approach (explanative or exploratory mixed method), still few studies in leadership research (but also in educational research in general) are trying to integrate these demands and ideas into their research designs. It is also interesting to see how alternative data gathering methods might illuminate the complexity of organisation and leadership context, as, e.g. Huber (2008, 2009) uses Social Network Analysis, Life Curve Analysis, such as pictures and metaphors. Besides data gathering methods, there is also a need of more refined methods of data analysis such as multi-level, growth models, structure equation modelling, to name some of them, which are about to become popular.

More original research in the field needs to be undertaken, in particular outside of North America, as the overreliance on findings from studies conducted in the USA needs to be alleviated. Leadership, like other factors in education, is contextual (i.e. structurally and culturally specific), and it is therefore not valid to expect findings to apply unproblematically across countries and even continents. There are obvious contextual differences in terms of leadership relating to the extent of autonomy school leaders have within the educational system, their appointment and selection criteria, while less immediately obvious cultural differences make it even less likely that one could simply import findings from one context to the other without at least some adaptation. This means that the tendency to move straight to prescription becomes potentially even more harmful where the research base is from an entirely different (cultural) context, where school leadership will operate under different circumstances and conditions.

Therefore, while leadership research has made important contributions to the field of education, which have had practical benefits, if we are genuinely to move both research and practice on we need to do more rigorous quantitative and qualitative research, aimed at both measuring impact and exploring processes, taking into account the complexity of schools as organisations, and refraining from an overly prescriptive approach that, on the basis of very limited research, posits absolute truths about good practice. If we continue the practice of coming up with a never-ending stream of poorly researched ideas, sooner or later research in this field is likely to lose credibility in the eyes of both practitioners and researchers, losing the possible benefits of genuinely improving what remains one of the key factors in educational effectiveness.

Last but not least we need to create better 'fits' of theories, empirical research and experienced practice. Hence, besides all methodological and methodical questions and desired modified research practice, there is also a need to refine theoretical models and theories (whether with a very focused or with a broader approach). Empirical research should lead to further developed theories and theoretical assumptions should guide our empirical work (if working in a deductive methodological approach).

## References

- Altrichter, H. & Posch, P. (1998). *Lehrer erforschen ihren Unterricht*. Klinkhardt: Bad Heilbrunn.
- Andrews, R. & Soder, R. (1987). Principal leadership and student achievement. *Educational Administration Quarterly*, 37(1), 77–96.
- Bamburg, J.D. & Andrews, R.L. (1991). School goals, principals, and achievement. *School Effectiveness and School Improvement*, 2, 175–191.
- Barth, R.S. (1990). *Improving schools from within: Teachers, parents and principals can make a difference*. San Francisco: Jossey-Bass Publishers.
- Bell, L., Bolam, R. & Cubillo, L. (2003). *A systematic review of the impact of school leadership and management on student outcomes*. In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.
- Biggs, J.B. (2003). *Teaching for quality learning at university*. Buckingham: Open University Press/Society for Research into Higher Education.
- Bolam, R. (1993). School-based management, school improvement and school effectiveness: overview and implications. In C. Dimmock (Hrsg.), *School-based management and school effectiveness* (S. 219–234). London: Routledge.
- Bolam, R., McMahon, A., Pocklington, K. & Weindling, D. (1993). *Effective Management in Schools: A Report for the Department for Education via the School Management Task Force Professional Working Party*. HMSO, London.
- Bossert, S., Dwyer, D., Rowan, B. & Lee, G. (1982). The instructional management role of the principal. *Educational Administration Quarterly*, 18(3), 34–64.
- Brewer, D.J. (1993). Principals and student outcomes: evidence from U.S. high schools. *Economics of Education Review*, 12(4), 281–292.
- Brookover, W.B. (1979). *School social systems and student achievement: schools can make a difference*. New York: Praeger.
- Brookover, W., Beady, C., Flood, P., Schweitzer, J. & Wisenbaker, J. (1979). *School social systems and student achievement: schools can make a difference*. New York: Praeger.
- Caldwell, B.J. & Spinks, J.M. (1992). *Leading the Self-Managing School*. London & Washington, DC: The Falmer Press.
- Cheng, Y.C. (1994). Principal's leadership as a critical indicator of school performance: evidence from multi-levels of primary schools. *School Effectiveness and School Improvement: An International Journal of Research, Policy, and Practice*, 5(3), 299–317.
- Cheng, Y.C. (2002) The changing context of school leadership: implications for paradigm shift. In K. Leithwood & P. Hallinger (Eds.). *Second international handbook of educational leadership and administration*. Norwell, MA, USA: Kluwer Academic Publishers.
- Creemers, B.P. (1994). *The effective classroom*. London: Cassell.
- Creemers, B. & Kyriakides, L. (2004). *The dynamics of educational effectiveness*. Abingdon: Routledge.
- D'Agostino, J.V. (2000). Instructional and school effects on students' longitudinal reading and mathematics achievements. *School Effectiveness and School Improvement* 11(2), 197–235.
- Dalin, P., Rolff, H.-G. & Buchen, H. (1990). *Institutionelles Schulentwicklungsprogramm*. Soest: Soester Verlagskontor.
- Edmonds, R. (1979). Effective schools for the urban poor. *Educational Leadership*, 37, 15–24.
- Fullan, M. (1991). *The new meaning of educational change*. London: Cassell.
- Fullan, M. (1992). *Successful school improvement*. Buckingham, Philadelphia: Open University Press.
- Fullan, M. (1993). *Change forces: probing the depths of educational reform*. London, Falmer Press.
- Fullan, M. (2001). *Leading in a culture of change*. San Francisco, CA: Jossey-Bass Inc.
- Fullan, M.G. (1996). Turning systemic thinking on its head. *Phi Delta Kappan*, 77(6), 420–423.
- Goldring, E.B. & Pasternak, R. (1994). Principals' coordinating strategies and school effectiveness. *School Effectiveness and School Improvement*, 5, 237–251.

- Gray, J. (1990). The quality of schooling: frameworks for judgements. *British Journal of Educational Studies*, 38(3), 204–233.
- Gunter, H. (2001) Critical approaches to leadership in education. *Journal of Educational Enquiry*, 2, 94–108.
- Hall, G.E. & Hord, S.M. (1987). *Change in schools: facilitating the process*. New York: State University of New York Press.
- Hallinger, P. & Heck, R.H. (1998). Exploring the principal's contribution to school effectiveness: 1980–1995. *School Effectiveness and School Improvement*, 9(2), 157–191.
- Hallinger, P. & Murphy, J. (1985). Assessing the instructional leadership behavior of principals. *The Elementary School Journal*, 86(2), 217–248.
- Hallinger, P., Bickman, L. & Davis, K. (1996). School context, principal leadership, and student reading achievement. *The Elementary School Journal*, 96(5), 527–549.
- Hargreaves, A. (1994). *Changing teachers, changing time: teachers' work and culture in the post modern age*. London: Cassell.
- Harris, A. (2004). Distributed leadership and school improvement: leading or misleading? *Educational Management Administration Leadership*, 32(1), 11–24.
- Hattie, J. (2005). What is the nature of evidence that makes a difference to learning. Paper presented at the *Australian Council for Educational Research Conference 'Using Data to Support Learning'*, 7–9 August 2005, Melbourne.
- Heck, R. (1993). School context, principal leadership, and achievement: the case of secondary schools in Singapore. *The Urban Review*, 25(2), 151–66.
- Heck, R.H., Larsen, T.J. & Marcoulides, G.A. (1990). Instructional leadership and school achievement: validation of a causal model. *Educational Administration Quarterly*, 26(2), 94–125.
- Hopkins, D., Ainscow, M. & West, M. (1994). *School improvement in an era of change*. London: Cassell.
- Hopkins, D., West, M., et al. (1996). *Improving the quality of education for all: progress and challenge*. London: Fulton.
- Huber, S.G. (1997). *Initial teacher training and teaching competence: some lessons from England for Bavaria?* Cambridge: School of Education, University of Cambridge.
- Huber, S.G. (1999a). School effectiveness: was macht Schule wirksam? *Internationale Schulentwicklungsforschung (I)*. *Schul-Management*, 2, 10–17.
- Huber, S.G. (1999b). School improvement: Wie kann Schule verbessert werden? *Internationale Schulentwicklungsforschung (II)*. *Schul-Management*, 3, 7–18.
- Huber, S.G. (2008a). School development and school leader development: new learning opportunities for school leaders and their schools. In J. Lumby, G. Crow & P. Pashiardis (Eds.). *International handbook on the preparation and development of school leaders*, 173–175. New York: Routledge.
- Huber, S.G. (2008b). Steuerungshandeln schulischer Führungskräfte aus Sicht der Schulleitungsforschung. In R. Langer (Eds.). *Warum tun die das? Governanceanalysen zum Steuerungshandeln in der Schulentwicklung*, 95–126. Wiesbaden: VS.
- Huber, S.G. (2008c). Was Lehrkräfte davon abhält zusammenzuarbeiten – Bedingungen für das Gelingen von Kooperation. In A. Bartz, J. Fabian, S.G. Huber, C. Kloft, H. Rosenbusch & H. Sassenscheidt (Eds.). *PraxisWissen Schulleitung* (81.10). München: Wolters Kluwer.
- Huber, S.G. (2009). Schulleitung. In S. Blömeke, T. Bohl, L. Haag, G. Lang-Wojtasik & W. Sacher, Werner (Eds.). *Handbuch Schule Theorie – Organisation – Entwicklung*, 502–511. Bad Heilbrunn: Verlag Julius Klinkhardt.
- Huberman, M. (1992). Critical introduction. In M. Fullan (Eds.). *Successful school improvement* (S. 1-20). Milton Keynes: Open University Press.
- Joyce, B. (1991). The doors to school improvement. *Educational Leadership*, May, 59–62.
- Kotter, J.P. (2000). Leading change: why transformation efforts fail. *Harvard Business Review*. Harvard Business School Publishing Corporation. All rights reserved. March–April 1995 61 Leadership, 44(6), 9–11.

- Leithwood, K. (1994). Leadership for school restructuring. *Educational Administration Quarterly*, 30(4), 498–518.
- Leithwood, K. & Jantzi, D. (1999). Transformational leadership effects: a replication. *School Effectiveness and School Improvement*, 4(10), 451–479.
- Leithwood, K. & Montgomery, D. (1982). The role of the elementary principal in program improvement. *Review of Educational Research*, 52(3), 309–339.
- Leithwood, K.A. (1992). The principal's role in teacher development. In M. Fullan & A. Hargreaves (Hrsg.), *Teacher development and educational change* (S. 86–103). London: The Falmer Press.
- Leithwood, K.A. & Riehl, C. (2003). *What do we already know about successful school leadership?* AERA Paper Task Force on Developing Research in Educational Leadership.
- Leithwood, K., Cousins, B. & Gerin-Lajoie, D. (1993). *Years of transition, times for change: a review and analysis of pilot projects investigating issues in the transition years (Vol. 2: Explaining variations in progress)*. Toronto: Final Report of Research to the Ontario Ministry of Education, Canada.
- Leithwood, K., Day, C., Sammons, P., Harris, A. & Hopkins, D. (2007). Seven strong claims about successful school leadership, 28(1), 27–42.
- Leithwood, K., Louis, K. S., Anderson, S. & Wahlstrom, K. (2004). *Review of research: how leadership influences student learning*. Wallace Foundation. Downloaded from <http://www.wallacefoundation.org/NR/rdonlyres/E3BCCFA5-A88B-45D3-8E27-973732283C9/0/ReviewofResearchLearningFromLeadership.pdf> on December 19, 2007.
- Leitner, D. (1994). Do principals affect student outcomes? *School Effectiveness and School Improvement*, 5(3), 219–238.
- Levine, D.U. & Lezotte, L.W. (1990). *Unusually effective schools: a review and analysis of research and practice*. Madison: National Centre for Effective School Research.
- Marzano, R.J., McNulty, B.A. & Waters, T. (2005). *School leadership that works: from research to results*. Alexandria, VA: Association for Supervision and Curriculum Development
- Mortimore, P., Sammons, P., Stoll, L., Lewis, D. & Ecob, R. (1988). *School matters: the junior years*. Somerset: Open Books.
- Muijs, D. & Reynolds, D. (2001). *Effective teaching, evidence and practice*. London: Falmer Press.
- Muijs, D., Harris, A., Lumby, J., Marrison, M. & Sood, K. (2006). Leadership and leadership development in highly effective further education providers. Is there a relationship? *Journal of Further and Higher Education*, 30(1), 87–106.
- Ogawa, R. & Bossert, S. (1995). Leadership as an organisational quality. *Educational Administration Quarterly*, 31(2), 224–243.
- Peters, T. & Waterman, P. (1983). *In search of excellence*. New York: Bantam Books.
- Pitner, N. (1988). The study of administrator effects and effectiveness. In N. Boyan (Ed.), *Handbook of research in educational administration*, 99–122. New York: Longman.
- Reynolds, D. (1976). The delinquent school. In M. Hammersley & P. Woods (Eds.), *The Process of Schooling*, 217–229. London: Routledge and Kegan Paul.
- Reynolds, D., Bollen, R., Creemers, B., Hopkins, D., Stoll, L. & Lagerweij, N. (Eds.). (1996). *Making good schools: linking school effectiveness and school improvement*. London: Routledge.
- Reynolds, D., Clarke, P. & Harris, A. (2004). Improving schools in exceptionally challenging circumstances. *American Education Research Association Conference*, 11–16th April, San Diego.
- Robinson, V.M.J. (2007). The impact of leadership on student outcomes: making sense of the evidence. The Leadership Challenge: Improving Learning in Schools. Conference Proceedings of the ACER Research Conference 2007, 'The Leadership Challenge: Improving learning in schools', 12–14 August, Melbourne, Australian Council for Educational Research (ACER), Camberwell, pp. 12–16, [www.acer.edu.au/research\\_conferences/2007.html](http://www.acer.edu.au/research_conferences/2007.html)
- Rutter, M., Maughan, B., Mortimore, P. & Ouston, J. (1979). *Fifteen thousand hours*. London: Open Books.

- Sammons, P., Hillman, J. & Mortimore, P. (1995). *Key characteristics of effective schools: a review of school effectiveness research*. A report by the Institute of Education for the Office for Standards in Education. London: Institute of Education.
- Scheerens, J. & Bosker, R.J. (1997). *The foundations of educational effectiveness*. New York: Elsevier.
- Scott, C. & Teddlie, C. (1987). Student, teacher and principal academic expectations and attributed responsibility as predictors of student achievement. Paper presented at the *Annual Meeting of the American Research Association*, Washington, DC.
- Sergiovanni, T.J. (1999). *Rethinking leadership: a collection of articles*. Arlington Heights, IL: Skylight Training and Publishing Inc.
- Silins, H.C. (1994). The relationship between transformational and transactional leadership and school improvement outcomes. *School Effectiveness and School Improvement*, 5(3), 272–298.
- Southworth, G. (2003). *Primary school leadership in context: leading small, medium and large sized schools*. London: Taylor and Francis.
- Stegö, N.E., Gielen, K., Glatter, R. & Hord, S.M. (Hrsg.). (1987). *The role of school leaders in school improvement*. Leuven: ACCO.
- Teddlie, C. & Stringfield, S. (1993). *Schools make a difference*. New York: Teachers College Press.
- Trider, D. & Leithwood, K.A. (1988). Influences on principal's practices. *Curriculum Inquiry*, 18(3), 289–311.
- Tringham, K. (2007). *Education gazette*, 86(11). See [www.edgazette.gov.nz](http://www.edgazette.gov.nz)
- Van de Grift, W. & Houtveen, A.A.M. (1999). Educational leadership and pupil achievement in primary education. *School Effectiveness and School Improvement* 10(4), 373–389.
- van Velzen, W.G. (1979). *Autonomy of the school*. S'Hertogenbosch: PKC.
- van Velzen, W. (1985). *Making school improvement work*. Leuven, Belgium: ACCO.
- Walace Foundation, Leithwood, Seashore Louis, Anderson and Wahlstrom (2004).
- Weil et al. (1984). Effective and typical schools: how different are they? Paper presented at the *Annual Meeting of the American Educational Research Association*, Chicago, 1984 April.
- Weiner, B. (1980). *Human motivation*. NY: Holt, Rinehart & Winston.
- Witziers, B., Bosker, R. & Kruger, M. (2003). Educational leadership and student achievement: the elusive search for an association. *Educational Administration Quarterly*, 39(3), 398–425.