Does School Leadership Matter for Student Learning in India? A Case Study of Sikkim

N. Mythili*

ABSTRACT

Leadership is a new area of focus for improving student learning in India. A study was conducted in Sikkim to understand the influence of school leadership on student learning in Indian context. Random sampling was used to select 35 schools. Rating scales were constructed and administered for school heads of secondary and senior secondary schools to self evaluate their practices. Results of correlation analysis show that school leadership practice on shared vision impacts school leadership through teacher professional development, which is directly related to school climate and child focus. These school leadership practices are influenced by leadership values, beliefs and experience of school head. They in turn mediate school processes influencing student learning indirectly through academic structures and work processes and directly through teacher professional development and child focus. It is, therefore, suggested that teacher professional development as a key leadership practice must lie with school heads for improved student learning.

School Leadership: Significance, Process, Styles and Context

In a world of fast growth, characterised by achievement motivation, one cannot but think and act as leaders including school heads. School leadership is the second most important factor only after teacher quality (Leithwood et al., 2004) constituting as high as 25 per cent of the total effects on student learning (Leithwood et al., 2008) that creates conditions for teachers to teach effectively (Dinham, 2008) dealing with issues on ensuring adequate staff,

^{*} Assistant Professor, National Centre for School Leadership, National Institute of Educational Planning and Administration, New Delhi. (e-mail: sastry.mythili18@gmail.com)

school structures, external links, and resources that allow students to be transformed into learners (Hee-Tie, 2008, p.420). As a result, school variations in classroom instruction are strongly associated with school leadership (Sebastian and Allenworth, 2012) for which principals build teams, translate vision for successful learning of all students, cultivate leadership in others, help teachers upgrade their skills and use data to foster school improvement (Mendels and Mitgang, 2013). The factors for such school leadership constitute a mediating path having school climate, academic capacity of teachers and their professional learning, school culture, managing instructional programmes, staff participation in decision making (Hallinger and Heck, 1996; Leithwood et al., 2006) and data-informed decision making on school processes (Shen et al., 2016).

School processes, characterised by transformational leadership practices, make a small but practically important contribution to overall student achievement (Leithwood and Jantzi, 1999; Marks and Printy, 2003) including the internal state of individual teachers (Ross and Gray, 2006; Liethwood and Sun, 2011), whereas pedagogical leadership is nearly four times more effective than transformational leadership for student learning outcomes (Robinson et al., 2008, 2009). Similarly, collaborative leadership builds capacity for academic improvement of teachers (Hallinger and Heck, 2010, 2011) whereas distributive leadership contributes to school improvement (Gronn, 2000 and Spillane, 2006).

Core leadership practices must also commensurate with school's immediate context to lead change (Klar and Brewer, 2013) as these practices are influenced by culture (Safran, et al., n.d.), such as working in poor urban areas necessitates exercising strong personal vision of education to create positive learning environment to support teachers and students (Hallinger and Murphy, 1985) or schools to come off their low base under challenging circumstances (Louis et al., 2010), etc. Confirming the fact that it is not the leadership practices by themselves but the manner in which leaders apply in concert with their unique environment determines the degree to which they influence student learning (Leithwood et al., 2006). Therefore, it is a specialist occupation requiring specific preparation and development (Bush, 2008) so much so that, many teachers perceive that their leadership practices and teaching skills improved having undergone a wellstructured university course on school leadership, though it is not a pre-requisite (Strevig, et al., 2013).

The Lost School Head: Status of School Leadership in India

The role of a school head was not seen distinct from that of teachers' in India until recently. She/he was referred mostly as head teacher or head master/mistress especially at elementary and secondary levels who spend their time mostly teaching like any other teacher in the school. So, there was no distinction between the role of a school head and that of other teachers. Only in senior secondary schools, principals are seen to be spending more time on management, administration, staff management, finances, etc.

Raising concerns about the quality of school leadership in India, Govinda (2002) and NUEPA (2010) emphasise on the need for improving working conditions and initiate school leadership development as several systemic constraints impede school heads to perform effectively. Sujatha (2011) found that self-motivated school heads are largely responsible for school success. The 12th five year plan recognised the role of school leadership as one of the four pillars for improving school quality (Government of India-Planning Commission, 2012, p.54). Since then, the initiatives to introduce school leadership development programmes (SLDP) have begun under *Sarva Shiksha Abhiyan* (SSA) and *Rashtriya Madhyamik Shiksha Abhiyan* (RMSA). Thus, leadership development in school is comparatively a new phenomenon in India.

For more than a decade, the responsibility of improving teacher quality largely is with SSA and RMSA. In the process, many of the primary responsibilities of school head got shifted to these programmatic structures, due to which, school head is left out of teaching-learning process. Further, SSA and RMSA programmes have forgotten to include the school head in any of their programmes ever since they came into existence in the year 2000. Having had no exposure to new knowledge, school head is rendered helpless in commanding the schooling process and lead teachers. Many of the core academic functions of school-head, such as academic supervision and guidance of teachers have been transferred to Block Education Officers who operate through Block Resource Centres and Cluster Resource Centres (Govinda, 2002) leaving the school head only with clerical works, reporting the status of implementation, maintaining infrastructure, and liaison with higher officials in the department to get funds, etc. School head's anguish expressed by many about being left out of the reform process is summarised:

"All these years, only teachers were called for all training programmes and HMs were left out of all these academic trainings. Having attended the training and learnt a few new terminologies, teachers would challenge their school heads by using those terms rendering them speechless for not knowing'... also, we are no longer considered teachers... We are expected to monitor, guide, inspect and report about teachers on all these matters as part of the SSA and RMSA programmes. We cannot ask teachers who are working under us. In the process, we are seen as incapable, not knowing, and inefficient school heads'."

It was echoed by other principals in many ways:

"Madam, we are so emotional today, like kids... we do not know how to control our emotions in this workshop (that is) meant only for us, HMs. Kindly tolerate (with) us for two or three days"¹

> President, Head Master's Association, Telangana State, India

"I wish this training was given five years ago when I was promoted as principal."

Principal, Sikkim

"I will not leave a chance to attend this training again and again." Principal, Manipur

These correspond to the observation made by an education officer from Himachal Pradesh:

"At the end of every teacher-training programme, we have recently begun to involve school heads for one or two days so that they are aware of the trainings given to teachers. This has helped school heads to implement programmes efficiently through teachers. School heads have now begun to feel that they are also part of the education system having involved in the educational reforms. The school leadership development programme (SLDP) has brought back the attention to school heads, today in the country."

The persisting lower levels of learning since 1990s (Agarwal, 1995) till date as the World Bank (2017) observed in its report on learning that there is a crisis in learning among students in countries such as India. The thrust and engagement in the dialogue at the national level by MHRD has significantly shifted towards improving quality of education, especially, student learning for which teacher education and school leadership are increasingly considered as areas of critical focus.

As expressed in a workshop with the author which was held to vet the curriculum framework on school leadership development for which school heads were invited.

Though there is a wide knowledge base at international levels on school leadership and leadership for learning, not much is known in Indian context. The discussion so for sets the requisite context for the present study. Also, very little is known about the influence of school heads on student learning. The present study, therefore, intends to examine how school leadership practices impact student learning outcomes in Indian context.

Leadership for Learning

Leadership For Learning (LfL) constitutes the core focus in the context of school education for which all other types of leadership perspectives, practices, styles, behaviours, processes, concepts and theories are meant. In practicing LfL, learning leaders know people, organisation, communities and contexts; they ask questions rather than provide answers; know what is happening with teaching and learning; and even find ways to release creative energy of teachers and students (Sackney and Mitchell, 2008, p.126). Various criteria and/or conditions for learning are suggested: having a 'compositional effect' (Martimore, 1998); 'social mix' for right attitudes (Thrupp, 1999); 'school as a learner', that grows every day so that one doesn't step into the same school twice (Senge, et al., 2003); pupils as community of learners (Townsend and MacBeath, 2011); 'flying below the radar' to keep learning at the very centre amidst myriad pressures and everyday business that requires both skill and will to pursue what is valued rather than what is simply measured (Hargreaves in Townsend and Mac Beath, 2011) to lead learning and ensure quality of learning (Al-Barwani, 2011).

LfL overcomes the pace and quality of learning through the workplace learning (Jwan and ong'ondo, 2011, p.410), through its quality of efforts and action. These are supported by key values, such as positive change, goal directedness and perseverance (Ezzaki, 2011) and are deeply influenced by the values, beliefs, knowledge and experience of school head; his/her leadership focus, context for leadership and sources of leadership (Hallinger, 2011). Thus, leaders best affect student learning outcomes when: they have an agreed and shared moral purpose; there is a disciplined dialogue; they plan, monitor and decide based on evidence; they are active professional learners with teachers; they enhance conditions for learning, manage and monitor

teaching, use distributive leadership, connect with parents and community (Dampster, 2015). So, LfL is a multidimensional and multilateral process held together by a common goal of learning in which not only individuals and organisations are involved but also different professional groups and specialised institutions working in areas other than education sector are associated.

Conceptualising Leadership for Learning for Indian Context

Given the strength of LfL for ensuring student learning, especially when learning levels of students are being increasingly subjected to international and regional scrutiny, contextualising LfL in Indian context is an important and optimistic step. LfL in Indian context refers to shared vision that aligns the processes, practices and perspectives of all teachers and school head in the school with adequate active participation of community, parents and higher education officials in the education system to collectively set realistic goals for learning. School head facilitates, enables and supports teachers to realise these goals especially through strengthening their academic and pedagogical competencies and skills and setting clear goals for teachers. She/he motivates, encourages innovation, works collectively with colleagues, provides forum for open dialogue, facilitates work processes and provides essential and sufficient conditions for teachers, children and stakeholders so that they experience a sense of well-being for accomplishing learning in the school. At the same time, school head does not forget the primary responsibility of attending children by addressing their developmental needs, aspirations, potentials and abilities via working with parents, teachers and community due to which adequate opportunities are made available for every child to learn. She/he supports these practices by adopting appropriate procedures that guarantee smooth administration of the school including active participation at the block, district and state levels to negotiate with education officials for improving the school facilities and environment, to implement policies and programmes of the government effectively and managing the time effectively between administrative and academic works. All these efforts culminate in student learning that is age and grade appropriate. It is indicated in the grades scored by students in Class X public examination.

Does School Leadership Matter for Student Learning in India...

Method

Sampling and sample

The site of study is Sikkim, one of the seven states in the inner ranges of Himalayas, situated in the North Eastern Region of India. It has a literacy rate of 82.2 per cent that is well above the national average of 74.4 per cent (Census of India, 2011). It is also the second highest among smaller states in the National Achievement Survey (NAS) on student learning outcomes (NCERT round IV, 2015). It has no Educationally Backward Blocks (EBB)² which contrasts other states in India. There are no single teacher schools where multi-grade teaching by a single teacher takes place in Sikkim unlike in other states. Hence, it is assumed that overall condition for practicing effective school leadership for student learning and improve school quality is favourable in the state. Despite the progress, the state also is nearly untouched by research in school education till now. Thus, Sikkim is chosen for the present study.

Simple random sampling was used to select 20 per cent as the sample from a total population of 177 secondary and senior secondary schools put together in the state. Thirty-five school heads constituted 20 per cent of the population for data collection. A simple random sampling could give better representation of all four districts rather than stratified random sampling because of small population size and inter-district variation regarding the total number of schools.

Tool construction

A number of studies on school effectiveness and improvement carried out in 1990s identify school leadership as a critical factor among other school factors (Townsend, 2007). For the purpose of selecting leadership practices relevant to Indian context, a few meta reviews, for example, Murphy, et al., 2007, Hallinger and Heck, 1996; Leithwood and Reihl, 2003; Leithwood et al., 2006; Marzano et al., 2005; Caldwell, 2003 have been conducted. Accordingly, Shared Vision and Goal Setting (SV), Teacher Professional Development (TPD), School Climate (SC) and Child Focus (CF) were selected. School Administration (ADMN) for the present study

An educational block is declared backward on a twin criteria of female literacy rate lower than the national average and a gender gap higher than the national average. For more details visit http://ssamis.nic.in/EBB/

was included to understand the administrative practices of school heads in Indian context as most of them find it difficult to achieve efficiency.

A four-point rating scale was constructed on each of the five leadership practices aligning with leadership values, beliefs, knowledge and experience; leadership focus; context; and sources of leadership (Hallinger, 2011) which in-turn corresponds to four critical aspects on leadership knowledge, namely; knowledge for understanding, reflection, action and practice (Bolam, 1999).

The first dimension of LfL model on values, beliefs, knowledge and experience was built into statements across all five leadership practices in the rating scale based on five principles regarding school leadership of principals referring to: principals will work with staff to set clear directions for school improvements; involve actively in supporting and developing school's curricular and instructional programmes; responsibility rests with principals for student performance; develops capacity of teachers to teach and lead; and principal is school's 'head learner', not merely a principal or head teacher (Hallinger, 2003, p.5).

The second dimension, *Leadership focus* has three main paths. The first path on vision and goals was studied by constructing the rating scale on Shared Vision and Goal Setting (SV). Second path on academic structures and processes was examined by developing four rating scales, separately, *viz.*, Teacher Professional Development (TPD), Child focus (CF), School Climate (SC) and Administration (ADMN). In developing the scale, academic structures and academic processes were considered together since structures are uniform across districts in Sikkim. So, collecting data on academic processes enabled to study school head's practices precisely when positioned within these structures. Accordingly, statements of actions in the rating scale were constructed.

In studying the third path refer to *people's capacity*, with four types of people, viz., teachers and staff, parents and community, education system functionaries, and fourthly the students were considered. Rating people's capacity by itself does not render much meaning to the present study, rather it is more meaningful to capture indirectly through five leadership practices identified. So, focusing on how school heads exploited people's capacity for achieving goals which is closely related to sources of leadership was found appropriate. To accomplish this, people's capacity and the fourth dimension on sources of leadership were integrated into

Does School Leadership Matter for Student Learning in India...

different statements constructed for the rating scale across all five practices. In other words, second dimension on leadership focus constitutes the core aspect of the study into which first and fourth dimensions were interwoven. A mapping exercise was carried out between the two paths on vision and goals; and academic processes with that of leadership practices identified from the review (Table 1).

Table 1
Mapping leadership practices from meta reviews with Hallinger's leadership for learning for identifying relevant school leadership practices in Indian context

Five School	Paths of School Leadership Focus			
Leadership Practices	Path 1: Vision and Goals Path	Path 2: Academic Structures and Processes		
Shared vision and Goals(SV)	Personal values of school head; professional values of school head.	Involve SMC/parents and teachers in goal setting for the school.		
Teacher Professional Development (TPD)	Demonstrate high performance expectation; facilitate teachers in setting individual goals.			
School Climate (SC)	focus on the actions themselves; creating a climate of high	Practicing transformational leadership; look for underlying causes for teacher behaviour; create teams for collaborative working environment; Safe and orderly environment; a culture of concern; offer individual support; develop teacher leadership among teachers; involving community/parents to participate in schooling processes.		
Chid Focus (CF)	the desire to improve the life chances of learners; foster	Provide intellectual stimulation; student engagement; principal's strong instructional leadership focus; learning directed student assessment.		
School Administration (SA)	Promote positive values; model organisational values.	Create strong network and ties with education departments; establish strong partnership with communities and parents.		

Leadership focus for the present study is measured in terms of pass percentage of students in the Class X public examination conducted annually by Central Board of Secondary Education (CBSE), a national body constituted for this purpose in India.

Third dimension on context of leadership was studied separately collecting data from government records, school visits and observation of schooling processes. It comprises profiles of school heads, such as age, caste, educational qualification, and experience as teachers and school heads, characteristics of education system in the state and social, geographical and educational background of the schools.

Data collection method

School heads self-evaluated their practices on a four point rating scale constructed for the purpose by ticking any one of the four levels of practice against each statement of action. The four points were: never practiced, sometimes practiced, mostly practiced and always practiced. Each statement was assigned a score of 1,2, 3 and 4, respectively.

Method of analysis and interpretation of results

The data was analysed using Pearson's Product-Moment Correlation. The 'r' greater than 0.5 alone were considered despite the fact that lesser 'r' coefficients were also significant at 0.01 or 0.05 levels except in case of relationship with student learning. The schema of analysis was based on the paths and vehicles described in Hallinger's (2011) LfL model. It begins with the third dimension in the context of leadership, referring to the profiles of school heads, socio-cultural and geographical context, education system structure, and overall performance of education system. Later, analysis on the second dimension, leadership focus, is discussed using correlation results.

The Path of School Leadership for Learning in Sikkim: Analysis and Interpretation

Context for leadership

It refers to the contextual factors, such as staff characteristics, power structure, resource availability, power relations, micro politics and socio-economic context of the community in which school is situated. School leader and school organisation mutually influence each other. Leadership is shaped by and responds to the constraints and opportunities in the school organisation and its environment. Hence, there is a reciprocal effect of school leadership

and school organisation on student learning (Hallinger, 2011). School context also includes school size, school level, student composition, teacher quality, institutional structure and societal culture (Dimmock, 2012). In the present study, it also includes social, economic, educational, cultural and geographical contexts which significantly influence school leadership practices, leader's values, beliefs and work processes.

Geographical characteristics

Sikkim is characterised by geographically difficult terrain with hills, forests, snow and big rivers. It is the second smallest state with the lowest population having four districts called North, South, East and West Sikkim. It has 12 major regional and/or tribal languages with well-developed scripts and literature. Despite sharing international borders with Nepal, Bhutan and China, it is comparatively more peaceful, conflict free and a developed state.

Education system

The hierarchical education system at state, district, block and cluster levels follows the syllabus prescribed by Central Board of Secondary Education (CBSE) at the National level. Schooling pattern consists of two years of pre-primary, eight years of elementary, two years of secondary, and two years of senior secondary education. Human Resource Development Department (HRDD) is responsible for school education in the State. It functions through administration wing headed by Principal Secretary who in turn is assisted by special secretary, additional secretary, joint secretary, directors, additional directors and joint directors. Academic Wing is looked after by Director School Education who is assisted by Joint Directors at district and state levels. School Principals have a dual responsibility to manage the school and Cluster Resource Centres.

Schooling pattern

Altogether, there are 767 schools, out of which 406 primary (1–5 standard), 184 junior high schools (1–8 standard), and 113 secondary schools (1–10 standard) and 64 senior secondary schools (1–12 standard). There are also eight sanskrit *pathashalas* (or schools), one *gumpa* school (local traditional school) and one buddhist school in Sikkim (HRDD-RMSA, 2015). The education system as a whole from State's Human Resource Development Department (HRDD) to school level is characterised by a number of good practices. Sikkim has only four types of school categories viz., standards from I–V, I–VIII, I–X and I/VI–XII as described above. Now, most of the schools

also have pre-primary attached as a policy implemented by HRDD, a significant development to ensure universal quality elementary education.

School leadership positions

There are four designated school leadership positions according to the hierarchy of school categories functioning in the state. These are — Head Master/Mistress in the pre-primary and primary school, Head Master/Mistress in Junior High School, Head Master/Mistress in secondary school, and Principal in senior secondary school (RMSA-Sikkim, 2014–15). Out of the 767 school head's vacancies, 700 posts were filled in the year 2015 accounting for more than 95 per cent schools having designated school heads. It is an indication of higher commitment of the state to provide quality education to children, a crucial supportive environment for school heads to perform effectively to achieve desired student outcomes.

Comparison between national scenario and Sikkim education system

The educational phenomenon in Sikkim contrasts the national level scenario. At the national level, there are 10 school categories, out of which six of them are stand-alone schools with no designated school head's positions as well as without sanctioned posts. Preprimary sections in most of these schools are absent and single-teacher schools are as high as 57 per cent (UDISE, 2013-14) which contrasts Sikkim with no single-teacher school³ in the state. At all India level, it is approximated that more than 50 per cent of the designated school head's posts are not filled.

Structure of education system in Sikkim is comparatively more stable than that prevailing in other parts of India with essential school categories that aligns with the school pattern prescribed at the national level, i.e., 5+3+2+2. Near absence of single-teacher schools in the State is one of the most significant achievements in ensuring school quality and student learning outcomes. Promotion policies for school heads and principals to become joint directors and subsequently directors in the system have provided ample scope and encouragement for school heads to perform to their full potential in Sikkim. All these indicate good practices adopted by the education system creating an ethos of favourable work culture at the state level. In a hierarchical system, good practices at the

These schools are small to very small schools having one or two teachers, which are set up within one kilometer norm to provide universal access to children for schooling.

system level percolate down to schools as favourable environment for school culture, conviction in practicing appropriate values and beliefs for school leadership, congenial work processes among education functionaries to support teachers and school heads. Leader's ability to interpret their context and adapt accordingly is the primary determinant of successful leadership for Learning (Dimmock, 2002).

Profile of school heads

Age, caste, educational qualification, teaching experience and administrative experience were studied to understand the basic profiles of school heads. The mean age of a school head was 46.6 years. The youngest school head was 39 years old. The maximum age of the group was 57 years. The average age of the sample was 46 years. Fifty per cent of school heads belonged to Other Backward Classes (OBC)⁴, 30 per cent to the Scheduled Tribes and 20 per cent to the General category. Educational qualification of school heads was found to be higher than the essential qualifications required for the post. All were professionally trained with a bachelor's degree in education. Fifty per cent of school heads possessed one master's degree in a curricular subject. Twenty per cent of school heads were graduates in curricular subject and education. Another twenty per cent had separate master's degrees in a curricular subject and education. Five per cent possessed M.Phil and M.Ed. degrees. Another 5 per cent had acquired a Ph.D. with two master's degrees. The average teaching experience of school heads was 15.1 years which ranged from 7 to 33 years. Average experience in school administration was 5.3 years that ranged from 1.5 to 16 years.

Leadership focus, its sources, values, beliefs and knowledge

School leadership is moderated by personal characteristics of leaders themselves that influence decision making processes, providing substitutes for gaps in the information, solves problems, shapes thinking, action and the school's culture. So, for articulating the personal values and beliefs constitutes fundamental competencies of a leader, which is used in consensus with the school's values (Hallinger, 2011). Results of Pearson's Product Moment Correlation analysis indicate that there is a direct relationship between SV and TPD as the coefficient of correlation, 'r', is 0.522 with $p \le 0.05$. TPD is directly related to SC as r = 0.607 with $p \le 0.01$ and; TPD is also

It is a caste Category recognised by the Government of India to include those castes under a single umbrella which were not considered as dominant yet does not belong to the lowest category of Scheduled Caste (SC) and Scheduled Tribe.

directly related to CF with 'r' = 0.523 with p \leq 0.05. There is also direct relationship between SC and CF having r = 0.538 with p \leq 0.05. So, SV is related to CF and SC mediated through TPD. And TPD, SC and CF are directly related to each other. CF and TPD are mildly related to student learning having 0.169 and 0.297, respectively, at p \leq 0.05. Student learning and school administration are not directly related to any leadership practice (Table 2) considered in the study. Thus, two kinds of relationships between different leadership practices in Sikkim can be observed, viz., direct and mediated. Dotted lines represent mediated relationship and straight lines represent direct relationships (Figure 1).

Table 2
Relationship between school leadership practices and student learning in Sikkim

	sv	TPD	sc	CF	ADMIN	SSPASS
sv	1	0.522* (0.026)	0.199 (0.428)	0.062 (0.808)	0.171 (0.497)	0.010 (0.980)
TPD	0.522* (0.026)	1	0.607** (0.008)	0.523* (0.026)	0.440 (0.068)	0.297 (0.05)
SC	0.199 (0.428)	0.607** (0.008)	1	0.538* (0.021)	0.355 (0.149)	0.121 (0.678)
CF	0.062 (0.808)	0.523* (0.026)	0.538* (0.021)	1	0.420 (0.083)	0.169 (0.05)

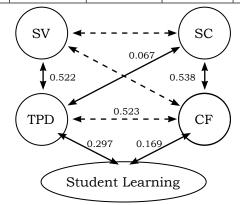


Figure 1: School leadership path for Sikkim

ADMIN	0.171 (0.497)	0.440 (0.068)	0.355 (0.149)	0.420 (0.083)	1	0.001 (0.998)
SSPASS	0.010 (0.980)	0.297 (0.05)	0.121 (0.678)	0.169 (0.05)	0.001 (0.998)	1

^{*} Correlation is significant at the 0.05 level (2-tailed).

The three main paths in LfL model (Hallinger, 2011) linking school leadership with student learning are applied to interpret these results, namely vision and goals, academic structures and processes and people capacity.

^{**} Correlation is significant at the 0.01 level (2-tailed).

Path 1—Vision and Goals

Vision and goals are the most significant path to inspire people, ensure collective effort and provide a strong basis for decision making on various matters. Correlation results show two sets of direct relationships: between SV and TPD, and; between TPD, SC and CF. There is no significant relationship between SV and SC and SV and CF but all of them are held together as they are independently correlated with TPD. Even though SV is not directly related to SC and CF, it is mediated through TPD, implying that TPD acts as a critical entry point for SV to influence SC and CF. In other words, SV pervades all other leadership practices mediated through TPD. It means that there is an academic thrust in SV practices of school heads that provides a strong basis for academic processes to influence leadership practices on SC and CF in Sikkim. Three pillars of leadership are vision, influence and values (Bush, 2008) to inspire and support others for goal achievement (Goleman, 2002). Successful leaders contribute to student learning through a combination of strategies (Day, et al., 2010).

Path 2—Leadership and Academic Processes and Structures

Academic structures and processes are unique spaces exclusively meant for schools. Mediated effects of school leadership in this space facilitate changes in school organisation and student learning. Growth in school leadership leads to positive changes in school organisation. Conversely, changes in school organisation lead to changes in leadership (Hallinger, 2011) having the largest impact on student learning for which instructional leadership constitutes a decisive component (Halverson, et al., 2007).

Academic processes and structures, the second path, depend on efficacy of leadership who supports and participates in the professional development of teachers and staff. The strength of the linear relationship between TPD and SC is strongest (r = 0.607, p≤0.01) when compared to relationships between other school leadership practices. It means that TPD and SC influence each other considerably. The significant linear relationship between TPD and SC, SC and CF, CF and TPD implies that school leadership practices mediated through TPD are not only child-centric but also teacher-centric in Sikkim. The result is particularly noteworthy as it is well known that teacher quality is the most important factor that directly influences student learning. Hence, focussing on staff learning and development is integral to practicing instructional

leadership by school heads for ensuring student learning and overall development (Shatzer, etal., 2014).

Further, the indirect relationship between SC and SV mediated through TPD represents the schools' ethos for academic processes in the school. Shared vision drives the school's academic climate in which teacher development is recognised as an important leadership practice. It is particularly in agreement with the LfL model's proposition that academic improvement exercise always influences student learning, especially when the principal supports and participates in the professional learning of the staff. In the present study, school climate, teacher development and child focus practices construct these academic structures and processes driven by a shared vision.

TPD as a leadership practice connects with other leadership practices directly which implies that professional development of teachers is the most important school leadership practice in Sikkim. It influences the school climate more than any other aspect of schooling processes due to its high correlation results. An important school leadership practice influencing student learning in Sikkim is the direct involvement of school heads in teachers' professional development. Such an involvement has a significant impact on the student learning among other factors. It is also evident from the fact that Sikkim stands second highest among smaller states in the National Achievement Survey on student learning in 2014-15. In this sense, LfL also implies teacher's learning. Building a capacity of this order involves developing new knowledge, skills and competencies and new shared identity to work together (Fullan, 2008). Thus, leaders employ strategic actions that change the paths which may then translate to improvements in outcomes (Hallinger & Heck, 2011).

Student learning and School leadership practices

There is a mild correlation between TPD as leadership practice and student achievement in the present whose strength of relationship is 0.297 that is significant at 0.05 level. It means that student learning is directly related to teacher professional development as leadership practices in Sikkim. Since TPD is connected to shared vision, school climate and child focus, student learning is also indirectly related to all other factors. Hence, professional development of teachers has the most powerful influence on quality of teaching and student learning. It also concurs with international research evidences which state

that school leadership has indirect effect on student learning (Pinter, 1988; *Robinson*, et al., 2008, 2009) mainly through school and classroom conditions (Leithwood and Jantzi, 2000).

Further, child focus as a leadership practice is also mildly associated with student learning, at 0.169 with p≤ 0.05. This is unique to Indian context. It means that school head in India cannot assume that if teachers' development is taken care of, students will learn. There is an immense responsibility on the school head to personally involve and empathise with children whenever and wherever possible. Thus, child focus as leadership practice consolidates student learning while TPD contributes to student learning. We can say child focus as a leadership practice has the potential to compensate for the limitations of teacher effectiveness especially in rural and remote areas where facilities may or may not be adequate and structural issues related to social, economic, cultural and traditional contexts overwhelm children to participate regularly and effectively.

Just as in international context, leadership practices mediate academic processes through Teacher Professional Development, creating a favourable school climate, ensuring child focus, building a shared vision, setting the goals, all of which involve people's capacity and right processes even in Indian context. Thus, school head's direct engagement with teacher professional development and child focus are like two wings of a bird for ensuring student learning.

Workplace learning can be intentional or unintentional, formal or informal, tacit or explicit knowledge (Pegg, 2008). Correlation results reveal that the school administration has no significant relationship with any other leadership practices in Sikkim. LfL models also do not indicate that school administration is an important component of leadership practice. It may be assumed that school administration by HM requires no additional emphasis in Sikkim for student learning as the context of school education system in the State is characterised by well-structured processes and systems driven by technology contributing to its efficiency.

LfL is a characteristic, both in processes and goals regardless of whether its beneficiaries are students or professional community (Ezzaki, 2011). Hallinger's LfL model proposes three main vehicles of leadership for learning to traverse the three paths, viz., school culture, work processes and people that impact academic structures and processes considerably. In the present study, first

dimension on school leadership related to values and beliefs, and work processes as vehicle are considered together to interpret the results as they mutually influence each other. School culture is considered separately to give special emphasis, though it cannot be separated from other two factors. People both as path and vehicle in terms of capacity are also considered distinctly.

Values, beliefs and work processes

Significant direct relationship between SC and CF in the present study corresponds to the nature of work processes in Sikkim's schools. Similarly, significant relationship between SV and TPD signifies the nature and characteristics of values and beliefs of leaders for student learning and school quality. The predominant values practiced by school heads in Sikkim are reflected through child-centric and teacher-centric approach adopted in the schools as evident from the correlation results related to significant relationships between SC, CF and TPD. Therefore, the present study shows that leadership values and beliefs direct the work processes for student learning. Conversely, work processes provide feedback to the values and beliefs practiced in the schools. They indicate the strength of leadership values, beliefs and work processes in creating a school culture for student learning. Leadership practices, academic processes and structures discussed above also give further impetus to values, beliefs and work processes practiced and their mutual influence upon each other. In other words, leaders ground their actions in clear personal values that can be pursued in consonance with the professional values defined by the dominant government policies (Bush, 2008).

School culture

Developing an organisational culture of working with and through others focussing on learning and teaching to build academic commitment is an important factor among school heads (Day etal., 2010; Sammons et al., 2011). In the present study, school culture refers to receptivity in the school for change-initiatives and innovations by the school head, teachers, students and community to establish effective processes for student learning. The manner in which values are practiced, and beliefs are held and tested, contributes to the nature and characteristics of school culture. School culture so created, in turn, influences leadership practices and values, work processes, experience and knowledge. Education is a highly intellectual and caring enterprise wherein

teachers engage in rational dialogue with mutual respect and trust (Fullan, 2001). School heads need to distinguish between ability to learn and opportunity to learn that creates inclusive classrooms for learning (Shields and Mohan, 2008). Thus, it is central for the school head to provide learning environment in which all children experience success in learning and all teachers experience professional development.

Change initiatives and innovations influence the formation of academic climate resulting in a culture for learning in the school. In the schools visited, it was observed that nurturing and sustenance of an intellectually vibrant academic climate by school heads has contributed richly to school culture. It includes school heads undertaking international collaborative projects for improving student learning and supporting good teaching practices among teachers not only in their schools but also collaborating with other schools in their vicinity. It has resulted in the formation of unique school culture characterised by a socio-emotional connect between school head, teachers and students in an intellectually vibrant environment for learning. In another example, a school head in a tribal residential school in Gangyap, an interior village in west Sikkim District, demonstrated excellence both in sports and academic learning. The students won the national level basket ball championship consecutively for three years and at the same time excelled in academic subjects with high scores during the year 2012-15⁵. An important characteristic of LfL is innovation, based on taking initiatives by individuals or groups and directed to the improvement of students' learning (Ezzaki, 2011).

Path 3—People

People are considered both as a path and as a vehicle in the model. Results imply that school leadership practices related to people (i.e., TPD), processes (i.e., CF and SC) and vision (i.e., SV) closely interact with each other to create a people-centric approach wherein teachers and students are valued in Sikkim. Results from the present study align with model's emphasis that capacity building not only focusses on organisation but also on people. Dampster (2015) emphasises human agency as an important component for achieving LfL. Thus, sources of leadership, such as situational leadership addresses the need of the hour with a layered approach

⁵ Information shared by School Principal in the video NBA—'Let's take a trip to Sikkim and watch how the game'... mp4 accessed from youtube.com

having different foci, flexibility and sharing leadership with others in the school (Hallinger, 2011).

The interpretations derived above using the results lead to the following conclusion— school leadership practices in Indian context are influenced by values and beliefs of school leaders emphasising on people development to *mediate* the schooling processes adopting a balanced approach between child-centric and teacher-centric practices that direct them to initiate teacher professional development within the school for which building a favourable school climate takes place through shared vision and goal setting, that emerges as an important academic structure and a process, due to which school culture so formed embeds in it the change processes and innovations, thus, empowering the very school head through his/her own leadership practices to directly and indirectly influence student learning. This is precisely the leadership for learning as practiced in Indian context, specifically, Sikkim.

Findings

The present study attempts to explore so far the least-explored area of school leadership for learning in Indian context by considering a high performing state of Sikkim. Results show that school leadership practices in Sikkim mainly focus on teacher professional development and focusing upon the child for achieving higher school quality. Shared vision as a school leadership practice is indirectly related to other leadership practices, namely; school climate and child focus mediated through teacher professional development.

Results clearly indicate that school leadership in Indian context is directly and indirectly related to student learning influenced by values and beliefs, mediated through work processes that direct teacher professional development creating and using relevant and flexible academic structures for realising a school climate and a school culture that empowers school leader to focus on children, thereby, influence student learning. School heads in Sikkim continue to retain the erstwhile practice of involving themselves in core academic processes, the teacher professional development that guarantees student learning. This concurs with one of the LfL's characteristics that it intends to overcome the pace and quality of learning through workplace learning (Jwan and ong'ondo, 2011, p.410). Instructional leadership of school heads is an important

practice to ensure student learning in which creation of school climate and child focus constitute core academic functions for effective work processes which would in turn influence values, beliefs in adopting people-centric approach in their leadership practices. Therefore, it is crucial to position school head as lead learner, leading the teacher professional development within the school. Academic processes ought to be integrated with school improvement plans through shared vision exercises led by the school-head with autonomy and flexibility to improve school climate and necessary attention to children, influencing the school culture, ethos, and child-centric approaches that transform school's vision, values and beliefs. Results of the present study testify to this conclusion as TPD is related to school climate and child focus directly and that the significance of relationships between TPD and SC as leadership practices is the highest amongst all relationships studied.

School heads in Sikkim adopted people development approach to leadership practices emphasising on vision, teacher development, child centric and school academic climate which have influenced the work processes and school culture. Leaders best affect student learning outcomes when— they have an agreed and shared moral purpose; there is a disciplined dialogue; they plan, monitor and decide based on evidence; they are active professional learners with teachers; they enhance conditions for learning, manage and monitor teaching, use distributive leadership, connect with parents and community (Dampster, 2015). In order to reap rich dividends from people development approach, positioning school head as central to school transformation and development is essential, especially, when systemic reforms have failed to bring about institutional change. A shift towards institutional development in which the role of school leadership with schools as primary institutions for all educational change processes is crucial to address the low levels of student learning.

Actions Proposed: School Leadership Movement as the Path for Leadership for Learning

Given the diverse socio-cultural context in education system, a movement is necessary to create awareness, generate discussion and provide inspiration for every school head as they are the lowest in the hierarchy of leadership positions in education system, many of whom work in remote areas challenged by social, economic, and geographical circumstances experiencing seclusion from the larger education with bare minimum support and facilities from the system. The total literacy campaigns (TLC) created one such stir in the country in the late 1980s and 1990s hastening the process of literacy levels in the country. Drawing the experience from this initiative and taking advantage of advanced technology, a movement for leadership development may be worth trying in Sikkim as well as other states in India. Underneath the movement, purpose, context and human agency for LfL is present.

School Leadership Movement (SLM) is about creating an indigenous process for articulating and co-crafting the meaning, scope, objectives and approaches for effective school leadership practices in the education system for school heads, stakeholders and experts for improving student learning by participating together necessitating a shift in attitudes, values, notions and beliefs that influences transformation of schooling processes crossing the threshold level for achieving higher student learning. It is a movement on a leadership continuum in the education system for those working from various hierarchical leadership positions to dovetail into the school to support and share responsibility with the school head to lead critical changes that strengthens academic leadership, creates shared vision and replaces the notion of leader-follower with a collective of leaders to be at equidistant from school. It has the potential for knowledge creation, action, learning, sharing, interacting, and practicing by providing platform for reflection of one's attitudes and perceptions, facilitating in developing a vision, motivating members to assume leadership beyond positional roles and moving beyond micromanagement of routine school functions. For the school head, this movement is an internal journey from being an administrator and a manager, to reflective actor, a meta-cognitive thinker and an 'aware-d' change maker (Mythili, 2015) who can lead school change by developing a shared vision, creating an ownership among those who are related to school directly or indirectly for achieving student learning. In this sense, SLM becomes a path to be traversed. Therefore, objectives of SLM require studying real school practices, identifying best practices and innovations, deriving insights from experiential learning and small changes initiated by school heads in diverse school contexts.

Does School Leadership Matter for Student Learning in India...

These are to:

- provide a platform for exchanging perceptions and perspectives about school leadership among school heads, education functionaries and stakeholders.
- study, understand, contextualise and practice different leader ship processes and styles from the available literature in different country contexts.
- identify best leadership practices that make a difference to student learning.
- develop a state specific perspective on school leadership and its development.

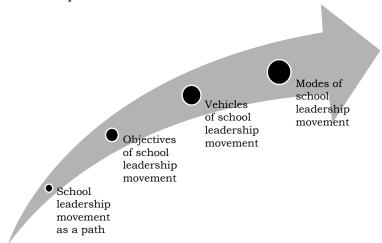


Figure 2: School leadership movement: A four fold approach

To fulfil the objectives of the movement, a four-fold approach is proposed here—Path→Objective→Mode→Vehicle for school Leadership development (see Figure 2) that includes—stakeholder participation, expanding the scope of SSA and RMSA programmes, people development and school—university interaction for LfL. These are four vehicles of SLM which aim to address the four modes of school leadership development given by Bolam (1999). Each mode of development is related to a particular vehicle for realising the objectives of SLM to emphasise the strength of traversing the path with its uniqueness. It is summarised briefly in Table 3 followed by description.

Table 3

Four-fold approach to school leadership movement in Sikkim:

A consolidation

Policy implication towards building the pathways	Policy actions as a vehicle	SLM objectives	Mode of leadership development
Expand the base for school leadership and its development	Stakeholder participation	Provide platform for exchange of perceptions, perspectives on school leadership	Knowledge for improvement of practice
Position of School head as the leader for learning	Expand the scope of SSA and RMSA programmes on school leadership development	Study, understand, contextualise, practice leadership styles and processes	Knowledge for action
TPD to be built into annual school development plans and school head as an academic leader for teacher professional development	Adopt people development approach	Identify best leadership practices that make a difference for student learning	Knowledge for reflexive
Redefine the roles and responsibilities of school head as an academic leader.	Establish school- university interaction for initiating a perspective shift in the knowledge, practice and perspective	Develop a state specific perspective on school leadership and its development	Knowledge for understanding

Vehicle 1: Stakeholder participation: Human Development Report, (2014) for Sikkim was created using participatory approach by creating a platform for people's participation called Information Education Communication (IEC). Leveraging on the existing readiness for a participatory approach in the State, School Leadership Movement can be initiated adapting the IEC suitably to facilitate the participation of school heads, educational administrators and system level officials, community, parents and students to discuss on implementing LfL through awareness creation, public engagement and participation in school leadership development programmes, voluntary participation, creating a discourse by organising 'Confluence of School Leadership', which

would eventually result in a collective responsibility of the school and people. Thus, stakeholder participation facilitates in providing a broader base for LfL in Sikkim. This approach aims to address the first objective of SLM that seeks to develop leadership through improvement of practice suggested by Bolam (1999).

Vehicle 2: Expanding the scope of central programmes: All school heads have to undergo a 10-day residential training followed by three project-cycles of project work (NCSL-NUEPA, 2014) under School Leadership Development Programme through SSA and RMSA. The programme can be expanded to include the teacher professional development in which proportion of time spent for theory is decreased and practice is increased gradually to align leadership perspectives, theory and research with people and practice. This approach addressing the second objective of SLM relates to knowledge for action, one of the four modes of leadership development proposed by Bolam (1999).

Vehicle 3: People development: School Leadership Movement as a discourse of *People Development* refers to improving leadership styles, processes and means for changing notions, beliefs and assumptions, creating a sense of ownership and so on through meta-cognition, awareness, constructing indigenous knowledge and creating an array of practices that relate with political, economic, cultural and social contexts, thus referring to conscentisation for leadership development by actors and stakeholders. Periodic study classes held once in 10 days at cluster and block levels on school leadership practices and self development coupled with the use of ICT and electronic gadgets, translating insights from the study classes into practices, identifying innovative leadership practices, bringing out a souvenir on school leadership at cluster/block levels, and so on to create indigenous knowledge on school leadership to address differentiated needs of school leaders. This approach largely addresses the third objective of SLM without excluding the first two, adopting a multi-pronged approach for leadership development, which Bolam (1999) calls Knowledge for reflexive.

Vehicle 4: School-University connect for LfL: The indigenous knowledge so created on school leadership must also influence the discourses taking place in the teacher education in universities and institutions and vice-versa. The dynamic interaction between discourses taking place at the school level, education departments and university needs to find a predominant place to bring together

theory and practice to influence and inform each other. In a significant move, the Central Government has initiated the settingup of Leadership Academies to develop academic leadership since 2015 in different institutions and universities in the country in the area of higher education. However, this initiative continues to neglect the role of school head as a critical academic player who also needs to align with higher education in which teacher education is situated. School heads must be included as critical stakeholders in the leadership academies for developing academic leadership that contributes to student learning and learn from universities to undertake teacher professional development back in the schools. Establishing linkages between the university, State Council for Research and Training in the states, the school and Departments of Education to translate theories into practices and vice-versa has immense scope for creating indigenous knowledge on school leadership for action and learning, thus, bridging the gap between teachers, administrators, teacher educators and university faculty. This addresses the fourth objective of SLM, which according to Bolam's (1999) is 'knowledge for understanding'.

References

- AGARWAL, Y. 1995. Base line Assessment Survey: A Study of Learner Achievement in Karnataka. A paper presented in NIEPA-IIM seminar on Educational Planning and Management in Karnataka. Bangalore, May 17–18.
- AL-BARWANI, T. 2011. Leadership for Learning in Middle East: The Road Travelled Thus Far. In Townsend, T. and Mac Beath, J. (Eds), *International Handbook of Leadership for Learning (Part1)*. Springer International handbooks of education 25, London.
- Bolam, R. 1999. Educational Administration, Leadership and Management: Towards a Research Agenda. In T. Bush, Bell, L., Bolam, R., Glatter, R., and P. Ribbins (Eds.), *Educational Management: Redefining Theory, Policy and Practice*, (Chapter 15, pp. 193-205). Paul Chapman, London.
- Bush, T. 2008. Leadership and Management Development in Education. Sage, New Delhi.
- Caldwell, J.B. 2003. A Blueprint for Successful Leadership in an era of Globalisation in Learning. In Philip H. (Ed.), Reshaping the Landscape of School Leadership Development: A Global Perspective. Swets and Zeitlinger B.V.Lisse, Netherlands.
- Census of India. 2011. Census of India Report. Government of India, New Delhi.
- Dampster, N. 2015. Leadership for Learning: A Framework for Synthesising Recent Research. Available at www.pall.asn.au/wp-content/uploads/2015/.../1-Leadership-for-Learning_Dempster.pdf. Accessed on 8/9/2017.

- Day, C., Sammons, P. Hopkins, M. Harris, A. Leithwood, K. Qing Gu and E. Brown. 2010. *Ten Strong Claims About Successful Leadership*. National college for leadership of schools and children's services, Nottingham.
- DIMMOCK, C. 2002. Educational Leadership: Taking Account of Complex Global and Cultural Contexts. In Walker, A. and Dimmock, C. (Eds.), School Leadership and Administration: Adopting a Cultural Perspective (pp. 33-44). Routledge Falmer, New York.
- ——. 2012. Leadership, Capacity Building and School Improvement: Concepts, Themes, and Impact. Routledge, London.
- DINHAM, S. 2008. How to Get your School Moving and Improving: An Evidence Based Approach. ACER Press, Melborne.
- EZZAKI, A. 2011. A Multi Faced Perspective on Leadership for Learning: A Case Study of Moroccan Education. In T. Townsend and M.B. John. (Eds.), *International Handbook of Leadership for Learning*. (vol. 25, Chapter 10. pp. 121–42). Springer International Handbooks of Education, New York.
- Fullan, M. 2001. *The New Meaning of Educational Change* (3rd ed). Teachers College Press, New York.
- ——. 2008: *The Six Secrets of Change*. Jossy Bass-Willey, San Francisco. Goleman, D. 2012. The New Leaders: Transforming the Art of Leadership into Science of Results. Little Brown, London.
- Government of India Planning Commission. 2013. Twelfth Five Year Plan (2012–2017): Social Sectors (vol. 3). Sage India, New Delhi.
- GOVINDA, R. 2002. Role of Head Teachers in School Management: Case Study of Six States. Asian Network of Training and Research Institutions in Educational Planning (ANTRIEP) in collaboration with European Union. New Delhi: National University of Educational Planning and Administration (NUEPA).
- Gronn, P. 2000. Distributed Properties: A New Architecture for Leadership. *Educational Management Administration and Leadership. vol. 28.* pp. 317–338.
- Hallinger, P. and J. Murphy. 1985. Assessing the Instructional Management Behaviour of Principals. *Elementary School Journal.* vol. 86, no. 2. pp. 217-247.
- HALLINGER, P. AND R.H. HECK. 1996. Reassessing the Principal's role in School Effectiveness: A Critical Review of Empirical Research 1980–1995. Educational Administration Quarterly, vol. 32, no. 1. pp. 5-44.
- ——. 2010. Collaborative Leadership and School Improvement: Understanding the Impact on School Capacity and Student Learning. School Leadership and Management. vol. 30, no. 2. pp. 95-110.
- 2011. Conceptual and Methodological Issues in Studying School Leadership Effects as a Reciprocal Process. *School Effectiveness and School Improvement. vol. 22, no. 2. pp.* 149–173.
- HALLINGER, P. 2011. Leadership for Learning: Lessons from 40 years of Empirical Research. *Journal of Educational Administration*, vol. 49, no. 2. pp. 125–42.
- HALLINGER, P. (ED). 2003. Reshaping the Landscape of School Leadership Development: A Global Perspective. Swets and Zeitlinger B.v., Lisse, Netherlands.

- HALVERSON, R., J. GRIGG. AND R.T. PRICHETT. 2007. The New Instructional Leadership: Creating Data-Driven Instructional Systems in Schools. *Journal of School Leadership, vol. 72, no. 2.* pp. 159–194.
- Hee Tie, Falt. 2011. Leadership for learning in Malaysian schools. In T. Townsend and M.B. John. *International Handbook of Leadership for Learning* (vol. 25, Chapter 24, pp. 419–429). Springer international handbooks of education, New York.
- Human Development Report-Sikkim. 2014. Expanding Opportunities and Promoting Sustainability. Routledge, New Delhi.
- JWAN, O.J. AND C.O. ONG'ONDO. 2011. Education Leaders for Learning in Schools in Kenya: The Need for Reconceptualisation. In T. Townsend, T. & M.B. John. *International Handbook of Leadership for Learning* (vol. 25, Chapter 23, pp. 397–417). Springer international handbooks of education, New York.
- Klar, W.H. and C.A. Brewer. 2013. Successful Leadership in High-Needs Schools: An Examination of Core Leadership Practices Enacted in Challenging Contexts. *Educational Administration Quarterly*. vol. 49, no. 5. pp. 768–808.
- Leithwood, K. and C. Riehl. 2003. Successful School Leadership: *A Report by a Division of AERA. National College of School Leadership*, Nottingham. Avaible at http://dcbsimpson.com/randd-leithwood-successful-leadership.pdf Accessed on 15/3/2015.
- Leithwood, K. and D. Jantzi. 1999. The Relative Effects of Principal and Teacher Sources of Leadership on Student Engagement with School. *Educational Administration Quarterly*. vol. 35, no. 5. pp. 679–706.
- Leithwood, K. and D. Jantzi. 2000. The Effect of Transformational Leadership on Organisational Conditions and Student Engagement. *Journal of Educational Administration*. vol. 38, no. 2. pp. 112–29.
- Leithwood, K., L.K. Anderson and S. Wahlstrom. 2004. Review of Research-How Leadership Influences Student Learning. Wallace Foundation, New York.
- Leithwood, K., C. Day, P. Sammons, A. Harris, and D. Hopkins. 2006. Successful School Leadership: What it is and How it Influences Pupil Learning. Research Report No. 800. National College for School leadership, University of Nottingham.
- LEITHWOOD, K. AND D. JANTZI. 2008. Linking Leadership to Student Learning: The Contributions of Leader Efficacy. *Educational Administration Quarterly*. vol. 44, no. 4. pp. 496–528.
- LEITHWOOD, K., A. HARRIS AND D. HOPKINS. 2008. Seven Strong Claims About Successful School Leadership. School Leadership and Management. vol. 28, no. 1. pp. 27–42.
- LEITHWOOD, K. AND J. Sun. 2011. The Nature and Effects of Transformational School Leadership: A Meta Analytic Review of Unpublished Research. *Educational Administration Quarterly.* vol. 48, no. 3. pp. 387-423.
- Louis K.S., K. Leithwood, K. Wahlstrom and S. Anderson. 2010. Learning from Leadership: Investigating the Links to Improved Student Learning. Centre for Applied Research and Educational Improvement University of Minnesota and Toronto: Ontario Institute for Studies in Education University of Toronto.

- MARKS, H. AND S. PRINTY. 2003. Principal Leadership and School Performance: An Integration of Transformational and Instructional Leadership. *Educational Administration Quarterly*. vol. 39, no. 3. pp. 370–97.
- MARTIMORE, P. 1998. Reflections on School Efffectvieness: The Road to Improvement. Swets and Zeitlinger, Lisse.
- Marzano, R.J., T. Waters, and B.A. McNulty. 2005. School Leadership that Works. Association of Supervision and Curriculum Development, Alexandria, VA.
- Mendels, P. and Lee. D. Mitgang. 2013. Creating Strong Principals. *Journal of Educational Leadership*. vol. 70, no. 7. pp. 22–19.
- Murphy, J., Elliot, S.N., Goldring., E. Porter, C. Andrew. 2007. Leadership for Learning: A Research Based Model and Taxonomy of Behaviours. *School Leadership and Management*, vol. 27, no. 2. pp. 179–201.
- National Council for Educational Research and Training. 2015. *National Assessment Survey (round IV)*. National Council for Educational Research and Training, New Delhi.
- National Centre for School Leadership (NCSL). 2014. *Handbook for School Leadership Development*. NUEPA, New Delhi.
- NUEPA. 2010 (Unpublished). Report of the Committee on School Leadership Development. NUEPA, New Delhi.
- PINTER, N. 1988. The Study of Administrator Effects and Effectiveness. In N. Boyan (Ed.), *Handbook of Research in Educational Administration*, (pp.99–122), Longman, New York, NY.
- Pegg, A.N. 2007. Learning for School Leadership: Using Concept Mapping to Explore from Everyday Experience. *International Journal of Leadership in Education*. vol. 10, no. 3. pp. 265–282.
- Human Resource Development Department—Rastriya Madhyamika Shiksha Abhiyan. 2015. Annual Report on School Education, Sikkim: (2014-15). Department of Education, Sikkim.
- ROBINSON, V., C. LLOYD AND K.J. ROWE. 2008. The Impact of leadership on student outcomes: An analysis of the differential effects of leadership types. Educational Administration Quarterly. vol. 44, no. 5. pp. 635–674.
- ROBINSON. V., M. HOHEPA AND C. LLOYD. 2009. School Leadership and Student outcomes: Identifying what works and why? Summary of the Best Evidence Synthesis (BES). Available at www.educationcounts.govt.nz/publications/series/2515, accessed on 16 March 2015.
- Ross, A.J. and P. Gray. 2006. School Leadership and School Achievement: The Mediating Effects of Teacher Beliefs. *Canadian Journal of Education*. vol. 29, no. 3. pp. 798-822.
- Sackney, L. and C. Mitchell. 2008. Leadership for Learning: A Canadian Perspective. Sense, Rotterdam.
- SAFRAN, E., D. BROWN AND A. WISEMAN. (n.d.). The Effect of Principal's Leadership style on School Environment and Outcome. Research in Higher Education Journal.
- Available at http://www.aabri.com/manuscripts/131666.pdf, accessed on 16 March 2015.

- SAMMONS, P., Q. Gu, C. DAY, AND J. Ko. 2011. Exploring the Impact of School Leadership on Pupil Outcomes: Results from a Study of Academically Improved and Effective Schools in England, *International Journal of Educational management*. vol. 25, no. 1. pp. 83–101.
- Sebastian, J., and E. Allensworth. 2012. The Influence of Principal Leadership on Classroom Instruction and Student Learning: A Study of Mediated Pathways to Learning. *Educational Administration Quarterly*. vol. 48, no. 4. pp. 626–663.
- Senge, P.M. Cambron-Mc Cabe, N., T. Lucas, B. Smith, J. Dutton, and A. Kleiner. 2001. Schools that Learn: A Fifth Discipline Field Book for Educators, Parents, and Everyone who Cares about Education. Doubleday, New York.
- Shatzer, H.R., P. Caldarella, P.R. Hallan, and B.L. Broom. 2014. Comparing the Effects of Instructional Leadership on Student Achievement: *Implications for Practice. Educational Management Administration and Leadership.* vol. 42, no. 4. pp. 449–459.
- Shen, J., Xin Ma, V.E. Cooley, and W.L. Burt. 2016. Mediating Effects of School Process on the Relationship Between Principals' Data-Informed Decision–Making and Student Achievement. *International Journal of Leadership in Education*. vol. 19, no. 4. pp. 373–401.
- SHIELDS, C.M., AND E.J. MOHAN. 2008. High Quality Education for all Students: Putting Social Justice at its Heart. *Teacher Development*. vol.12, no. 4. pp. 289–300.
- Spillane, J. 2006. Distributed Leadership. Jossey-Bass, San Francisco, CA. Strevig, A.L., D.W. Leech, S. Raiford, J.L. Pate, and J.B. Graves. 2013. Impact of an Educational Leadership Degree on Quality of Teaching as Measured by Student Performance. International Journal of Humanities and Social Science. vol. 3, no. 17. pp. 19–27. Available at http://www.ijhssnet.com/journals/Vol_3_No_17_September_2013/3.pdf, accessed on 16 March 2015.
- Sujatha, K. 2011. *Improving School Management-Learning from Successful Schools*. Asian Network of Training and Research Institutions in Educational Planning (ANTRIEP)-NUEPA, New Delhi.
- Townsend, T. (Ed.) 2007. *International Handbook of School Effectiveness and Improvement*. International Handbooks of Education. Volume 17, Springer.
- Thrupp, M. 1999. Schools Making a Difference: Let's be Realistic. Open University Press, Buckingham Palace.
- UDISE. 2013–14. *Unified District Information on School Education*. (2013–14). NUEPA, New Delhi.
- World Bank. 2017. World Development Report on Learning. World Bank, Washington.