

Summary of Empirical Research On Teacher Leaders' Administration Practices

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In their administrative practice, teacher leaders take on roles that resemble the leadership provided by school administrators, such as principals, assistant principals, and department chairs. Teacher leader administrative practice covers a range of roles, in which teacher leaders may work independently or alongside administrators, and in which they may assume instructional or managerial responsibilities. Teacher leaders' administrative practices can be sorted into three categories. In each of these three categories, teacher leaders' administrative practice is viewed from a different perspective:

**Leadership of the instructional program.* Teacher leaders may be called upon to be at the forefront of decisions and activities that inform the design of the school instructional program. In this administrative practice, teacher leaders assume primary ownership of activities such as serving as facilitator of a professional development session for administrators and teachers or leading analysis of student data.

** Collaborating with administrators.* In working with administrators, teacher leaders collaborate with administrators in a complementary role. In these studies, teacher leaders may be viewed as a source of knowledge of subject matter content and classroom pedagogy in administrative decisions. Examples include: serving as a representative on a school council, conducting evaluations of teachers, or selecting a professional development program.

** Managerial practices.* Teacher leaders may assume responsibilities for general operations that would typically fall to administrators. These studies provide an image of teacher leader practice in which the teacher leaders work independently in the place of an administrator, performing such duties as managing or ordering instructional materials.

Twenty-eight studies were identified in a review of the research that included findings on teacher leaders' administrative practice. These findings examined teacher leaders' administrative practice in two ways:

- Twenty one studies examined the phenomenon of teacher leader administrative practice
- Seven studies investigated the kinds of preparation programs that resulted in teacher leader administrative practice

Teacher Leaders Engaged in Administrative Practice

A review of the empirical literature identified twenty-one studies which provided the clearest findings on the administrative practice of teacher leaders. These twenty-one studies included findings focused on teacher leaders' work with administrators or when teacher leaders take on leadership roles typically performed by administrators. Information about the research studies is displayed in Table 1. Information about the interventions examined is shown in Table 2.

Table 1: Administration Practices by Teacher Leaders – Study Characteristics

Study	Sample Size ¹	Data Types		Measures					Purpose	
		Qualitative	Quantitative	Interviews	Observations	Questionnaires/ Surveys/	Coaching Logs	Other	Program Evaluation	Research
Secondary department chair roles: Ambiguity and change in systemic reform (Bliss et al., 1995)	68	•				•				•
Elementary school leadership strategies and subject matter: Reforming mathematics and literacy instruction (Burch & Spillane, 2003)	15	•		•	•					•
Improving instructional capacity through field-based reform coaches (Coggins et al., 2003)	48	•	•	•	•	•				•
Teacher leaders: Middle school mathematics classrooms (Cruz, 2003)	20	•		•	•	•				•
Making meaning of teacher leadership in the implementation of a standards-based mathematics curriculum (Doyle, 2000)	4	•		•	•					•
The role of external facilitators in whole school reform: Teachers' perceptions of how coaches influence school change (Feldman & Tung, 2002)	5	•		•		•	•			•
The summative evaluation of the Science Quality Education Project (SQEP) (Gillis et al., 1991)	62	•		•					•	
Who's in charge here? Sources of leadership for change in eight schools (Heller & Firestone, 1995)	NA ²	•		•						•
The mantle of a mentor: The mentor's perspective (Lemberger, 1992)	17	•		•						•
Contested ground: The basis of teacher leadership in two restructuring high schools (Little, 1995)	21	•		•	•			•		•
Content is the subject: How teacher leaders with different subject knowledge interact with teachers (Manno & Firestone, 2006)	8	•		•	•					•
Leadership alignment: The challenge of distributed leadership (Martinez et al., 2005)	NA ³	•		•	•			•		•
The role of the science co-ordinator in primary schools. A survey of headteachers' views (Moore, 1992)	222	•				•				•
Teachers in middle level schools: Implications and recommendations from a National Study (Petzko, 2002)	NA ⁴	•				•				•
Principals and teachers leading together (Ryan, 1999)	12	•		•	•			•		•
The practice of leading and managing schools: Taking a distributed perspective to the school principal's work day (Spillane & Camburn, 2006)	NA ⁵		•					•		•
Urban school leadership for elementary science instruction: Identifying and activating resources in an undervalued school subject (Spillane et al., 2001)	NA ⁶	•		•	•					•
Gardens or graveyards: Science education reform and school culture (Vesilind & Jones, 1998)	2	•		•	•			•		•
The instructional cabinet and shared decision making in the Pittsburgh Public Schools: Theory, practice and evaluation (Wallace et al., 1990)	54	•				•				•
Low profile, high impact: Four case studies of high school department chairs whose transactions "transform" teachers and administrators (Wettersten, 1994)	4	•		•	•					•
Science as content, science as context: Working in the science department (Wildy & Wallace, 2004)	2	•		•	•					•

¹ For the purposes of this table, *Sample Size* refers to the number of teacher leaders involved in the study.

² The sample of teacher leaders was not specified; data were collected from principals, teachers, and district informants representing 8 schools.

³ The sample of teacher leaders was not specified; data were collected from teachers, principals, district leaders, and formally designated teacher leaders in 5 schools.

⁴ The sample of teacher leaders was not specified; data were collected from over 2400 principals.

⁵ The sample of teacher leaders was not specified; data were collected from 42 principals.

⁶ The sample of teacher leaders was not specified; data were collected from 13 K-8 schools.

Table 2: Administration Practices by Teacher Leaders – Intervention Characteristics

Study	Grade levels	Subject ⁷				Intervention				Teacher Leader Work		
		Math	Science	Other	NA	Full description	Teacher leader involvement voluntary	STEM faculty involved	Researcher(s) involved	Leadership of instructional program	Collaborate with administrators	Managerial practice
Secondary department chair roles: Ambiguity and change in systemic reform (Bliss et al., 1995)	9-12	•	•	•		Y	?	N	N	•		•
Elementary school leadership strategies and subject matter: Reforming mathematics and literacy instruction (Burch & Spillane, 2003)	K-5	•		•		N	?	N	N		•	•
Improving instructional capacity through field-based reform coaches (Coggins et al., 2003)	K-12				•	Y	?	N	Y	•	•	•
Teacher leaders: Middle school mathematics classrooms (Cruz, 2003).	6-8	•				N	N	N	N			•
Making meaning of teacher leadership in the implementation of a standards-based mathematics curriculum (Doyle, 2000)	K-5	•				Y	Y	N	N	•		•
The role of external facilitators in whole school reform: Teachers' perceptions of how coaches influence school change (Feldman & Tung, 2002)	K-8				•	Y	?	N	Y	•	•	
The summative evaluation of the Science Quality Education Project (SQEP) (Gillis et al., 1991)	K-12		•			N	Y	N	?			•
Who's in charge here? Sources of leadership for change in eight schools (Heller & Firestone, 1995)	K-5				•	Y	?	N	?			•
The mantle of a mentor: The mentor's perspective (Lemberger, 1992)	K-12				•	N	Y	N	Y	•		
Contested ground: The basis of teacher leadership in two restructuring high schools (Little, 1995)	9-12				•	Y	N	N	N	•		•
Content is the subject: How teacher leaders with different subject knowledge interact with teachers (Manno & Firestone, 2006)	K-12	•	•			N	Y	Y	Y			•
Leadership alignment: The challenge of distributed leadership (Martinez et al., 2005)	K-12	•				Y	?	N	Y		•	•
The role of the science co-ordinator in primary schools. A survey of headteachers' views (Moore, 1992)	K-5		•			Y	?	N	N			•
Teachers in middle level schools: Implications and recommendations from a National Study (Petzko, 2002)	5-9				•	Y	Y	N	N		•	•
Principals and teachers leading together (Ryan, 1999)	9-12				•	Y	N	N	N		•	
The practice of leading and managing schools: Taking a distributed perspective to the school principal's work day (Spillane & Camburn, 2006)	K-12				•	Y	?	N	N		•	
Urban school leadership for elementary science instruction: Identifying and activating resources in an undervalued school subject (Spillane et al., 2001)	2-5		•			Y	?	N	N			•
Gardens or graveyards: Science education reform and school culture (Vesilind & Jones, 1998)	K-5		•			Y	?	?	N		•	•
The instructional cabinet and shared decision making in the Pittsburgh Public Schools: Theory, practice and evaluation (Wallace et al., 1990)	9-12				•	Y	Y	N	N			•
Low profile, high impact: Four case studies of high school department chairs whose transactions "transform" teachers and administrators (Wettersten, 1994)	9-12				•	Y	N	N	N			•
Science as content, science as context: Working in the science department (Wildy & Wallace, 2004)	8-12		•			Y	?	N	N		•	

⁷ "Other" refers to other subject areas that were a focus of teacher leader work (e.g., literacy); "NA" refers to teacher leader work that did not have a subject-specific focus (e.g., engaging in whole school reform).

Six studies reported on teacher leaders who provided leadership in roles that affected the instructional program at the school- or grade-level. In these six studies, teacher leaders were the primary leader in activities such as leading analysis of student data with school principals⁸ and developing curriculum⁹.

Teacher leaders were identified as collaborating with administrators in ten studies. In these ten studies, teacher leaders worked alongside administrators in activities such as writing a school improvement plan¹⁰ and implementing a statewide school reform effort¹¹.

Fifteen studies included findings in which teacher leaders engaged managerial practices, in which teacher leaders oversaw responsibilities such as ordering supplies¹² or providing resources to teachers¹³.

In eight studies, teacher leaders were reported as engaged in multiple types of administrative practices. For example, a single study reported that teacher leaders collaborated with administrators in leading department meetings, and also were responsible for ordering materials for mathematics teachers¹⁴. The findings from these eight studies indicate that teacher leaders may be called upon to fulfill a variety of administrative responsibilities.

In the entire set of twenty-one studies, there was little information about the context in which the teacher leader administrative practices occurred. As a result, these studies constitute a summary of different types of administrative practices, but did not yield much knowledge on why teacher leaders engaged in these tasks. Among these twenty-one studies, two areas were noted as worthy of additional, future research: the relationship between teacher leader subject matter knowledge and their administrative practice, and the potential connection between teacher leaders' administrative practice and the direct support they provide to classroom teachers. These two areas are extensions of basic premises of teacher leader practice: that their knowledge of subject matter content and pedagogy is an important asset necessary effective teacher leadership, and that at least a portion of a teacher leader's time is spent working directly with classroom teachers.

Four studies included findings on the relationship between teacher leader knowledge and their administrative practice¹⁵. Findings from these four studies suggest teacher leader subject matter knowledge influenced which administrative responsibilities they performed and the amount of time teacher leaders devoted

⁸ For example, see Feldman & Tung (2002)

⁹ For example, see Bliss et al. (1995)

¹⁰ For example, see Feldman & Tung (2002)

¹¹ For example, see Vesilind & Jones (1998)

¹² For example, see Wildy & Wallace (2004)

¹³ For example, see Heller & Firestone (1995)

¹⁴ Burch & Spillane (2003)

¹⁵ Bliss et al. (1995); Burch & Spillane (2003); Little (1995); Manno & Firestone (2006)

to different types of administrative practice. Each of these four studies investigated the relationship differently, which limits the ability to draw conclusions across studies and indicating that this is an additional area that warrants future research.

Findings about teacher leaders performing administrative responsibilities were consistent across studies of teacher leaders in mathematics and science as well as studies of teacher leaders in other subject areas. In each of these twenty-one studies, teacher leaders who engaged in administrative practices were also called upon to provide direct support to teachers to improve their classroom instruction, indicating that teacher leaders fulfilled multiple and varied roles in schools. There was little in these studies about how teacher leaders' administrative and instructional support roles interacted. One study¹⁶ from the entire set of twenty-one included findings relevant to the relationship between teacher leader administrative practices and instructional support provided to teachers. This study found that, in schools where teacher leaders had limited access to working directly with classroom teachers, they focused on performing administrative responsibilities. This finding suggests that administrative practices may be performed by teacher leaders as a way to influence teachers that they cannot approach through direct instructional support strategies.

Effects of Preparation Programs on Teacher Leader Administrative Responsibilities

Seven studies identified in the review of the empirical literature examined the effects of teacher leader preparation programs on their administrative practice. Preparation programs were designed to develop teacher leaders' knowledge and/or skills through training or professional development. Information about the research studies is displayed in Table 3. Information about the interventions examined is shown in Table 4.

Most of these studies investigated the relationship between participation in a teacher leader preparation program and post-intervention teacher leader practice. One study included measures of pre-program knowledge of participants¹⁷. The relationship between teacher leader preparation and their administrative practice is examined in different ways. Two of these studies investigated change in teacher leader attitude towards administrative practices, such as the value they placed on various administrative responsibilities or the likelihood that they would engage in specific administrative practices¹⁸. Five studies investigated the relationship between teacher leader preparation programs and their actual practice in administrative responsibilities following participation in the teacher leader program¹⁹. These studies suggest that change

¹⁶ Vesilind & Jones (1998)

¹⁷ Hofstein et al. (2004)

¹⁸ Nesbit et al. (2001); Clift et al. (1992);

¹⁹ Brown et al. (2001); Fortner & Boyd (1995); Hofstein et al. (2004); National Board for Professional Teaching Standards (2001); Wallace et al. (1999)

Table 3: Effects of Preparation Programs on Teacher Leader Administrator Responsibilities – Study Characteristics

Study	Sample Size ²⁰	Data Types		Measures					Purpose	
		Qualitative	Quantitative	Interviews	Observations	Surveys/ Questionnaires	Coaching Logs	Other	Evaluation	Research
Teacher Leadership Project 2001: Evaluation report (Brown et al., 2001)	1000	•					•		•	
Developing the potential for collaborative school leadership (Clift et al., 1992)	33	•		•	•			•		•
Infusing earth systems concepts throughout the curriculum (Fortner & Boyd, 1995)	174	•				•			•	
The professional development of high school chemistry coordinators (Hofstein et al., 2004)	21	•	•			•			•	
Leading from the classroom. Highlights from the 2001 NBPTS National Board certified teacher leadership survey (National Board for Professional Teaching Standards, 2001)	2186	•				•				•
In their own words: What science and mathematics teacher leaders say are important aspects of professional development (Nesbit et al., 2001)	288	•		•		•				•
Six leadership models for professional development in science and mathematics (Wallace et al., 1999)	360	•		•	•		•	•		•

Table 4: Effects of Preparation Programs on Teacher Leader Administrator Responsibilities – Intervention Characteristics

Study	Grace levels	Subject ²¹				Intervention				Teacher Leader Work		
		Math	Science	Other	NA	Full description	Teacher leader involvement	STEM faculty involved	Researcher(s) involved	Leadership of instructional program	Collaborate with administrators	Managerial practice
Teacher Leadership Project 2001: Evaluation report (Brown et al., 2001)	K-12				•	Y	?	N	N			•
Developing the potential for collaborative school leadership (Clift et al., 1992)	K-12				•	N	?	N	Y		•	
Infusing earth systems concepts throughout the curriculum (Fortner & Boyd, 1995)	K-12		•			Y	?	Y	Y		•	
The professional development of high school chemistry coordinators (Hofstein et al., 2004)	8-12		•			Y	?	?	N			
Leading from the classroom. Highlights from the 2001 NBPTS National Board certified teacher leadership survey (National Board for Professional Teaching Standards, 2001)	K-12				•	N	Y	N	Y			•
In their own words: What science and mathematics teacher leaders say are important aspects of professional development (Nesbit et al., 2001)	K-5	•	•			Y	Y	?	Y			•
Six leadership models for professional development in science and mathematics (Wallace et al., 1999)	K-5	•	•			Y	?	?	Y		•	

²⁰ For the purposes of this table, *Sample Size* refers to the number of teacher leaders involved in the study.

²¹ “Other” refers to other subject areas that were a focus of teacher leader work (e.g., literacy); “NA” refers to teacher leader work that did not have a subject-specific focus (e.g., engaging in whole school reform).

in administrative practice is viewed as a possible outcome for participants of teacher leader preparation programs.

These seven studies consistently reported positive impact of preparation programs on teacher leaders' administrative practices, indicating an improvement in their attitude towards administrative practice or that teacher leaders' were engaged in administrative responsibilities. While these studies did not include documentation of teacher leaders' administrative practice prior to the preparation program, it is implied that reports of administrative practice following participation in the program were attributed to the preparation that was received. The effect of preparation programs on teacher leader administrative practice was consistent across studies in mathematics and science, as well as studies in other content areas, and across grade levels. This suggests that teacher leader preparation programs may influence their administrative practice in a variety of school settings.

Although only a portion of the studies provided details on the design of the preparation program, some common features were present. Most of these programs were extensive, estimated at over 100 hours, generally over a one to two year period. Programs were typically organized around a summer institute or around regular meetings over the course of the program. Studies were not designed to investigate nor provided sufficient details to examine the impact of specific components of the program design on teacher leader administrative practice. Therefore, future research is needed to examine the impact of program design on teacher leader administrative practice.

Evidentiary Base for Claims about Teacher Leaders' Administrative Practices

Teacher leaders' administrative practice can be examined through lenses of its relationship to teacher leader preparation, and of the types of administrative practice in which teacher leaders engaged. In this entire set of twenty-eight studies, there are some common methodological issues that should be taken into consideration when reviewing the findings described in this summary.

Most of the studies did not have a research design adequate for generalizing beyond the contexts of the particular study. No studies made use of a comparison group, against which to make claims of impact or improvement in teacher leaders' practice. The sample identified for study was usually not described in much detail and it is not known how participants were identified and selected.

A significant issue for these twenty-eight studies was the adequacy of the research design for claims of improvement in teacher leaders' administrative practices. With a single exception, studies did not employ a pre/post intervention

design for data collection²². Studies typically analyzed data collected after the intervention or collected at points in time during and after the intervention.

A second significant issue for these studies is the lack of reliable and valid measures. In the absence of common measures in the field, researchers devised their own instruments or created their own analytic schema, with little or no information reported about the reliability or validity of these measures. It is difficult, therefore, to aggregate findings across studies since it is not clear that the phenomenon is being measured or analyzed in the same ways. The majority of studies employed multiple data sources, though some relied on a single data source²³.

Findings represented in these studies seem to apply across grade levels, with studies fairly evenly distributed across elementary and secondary grades. Of the twenty-eight studies included in this summary, slightly more than half examined teacher leadership in mathematics and/or science. The remainder examined teacher leadership in other subject areas, or subject area was not specified. Looking across the studies, the influence of subject area (i.e. mathematics and science) on teacher leader practice was rarely a part of the findings, or addressed in any discussion of the findings. This may be attributed to the design of these studies, few of which were designed to explore the relationship between teacher leader administrative practice and subject area²⁴.

²² Hofstein et al. (2004)

²³ Studies that relied on a single data source: Bliss et al. (1995); Fortner & Boyd (1995); Gillis et al. (1991); Heller & Firestone (1995); Hofstein et al. (2004); Lemberger (1992); National Board for Professional Teaching Standards (2001); Spillane & Camburn (2006); Wallace et al. (1990);

²⁴ Exceptions are Bliss et al. (1995); Burch & Spillane (2003); Little (1995); Manno & Firestone (2006).

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