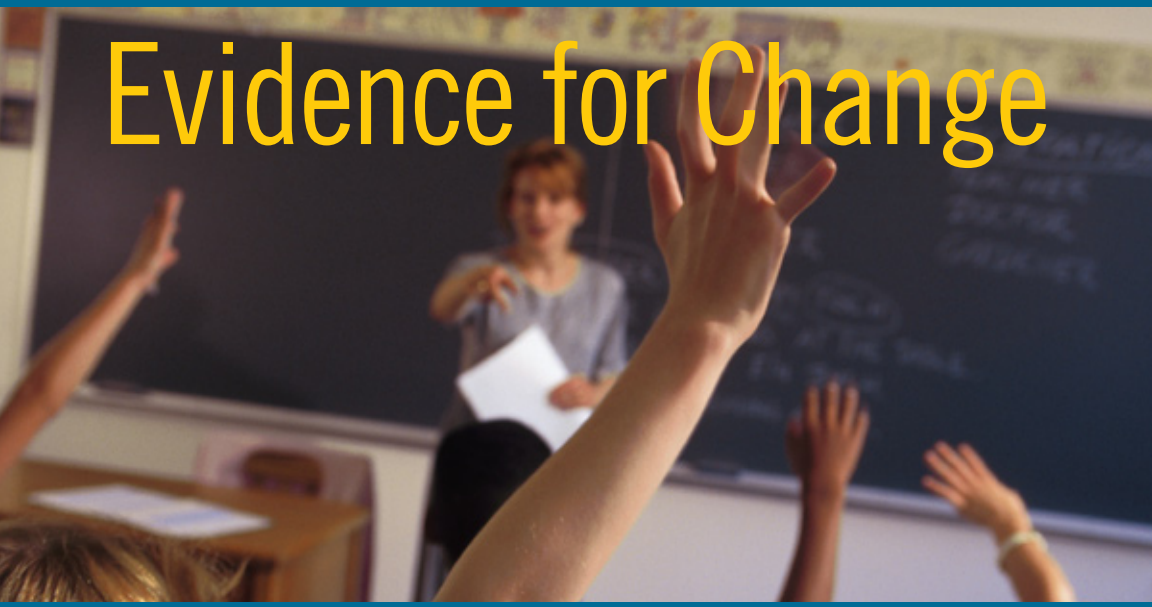
Teacher Working Conditions That Matter:

Evidence for Change



Kenneth Leithwood

Elementary Teachers' Federation of Ontario
Fédération des enseignantes et des enseignants de l'élémentaire de l'Ontario

Teacher Working Conditions That Matter: Evidence for Change

Kenneth Leithwood
Professor, OISE/University of Toronto
Prepared for the Elementary Teachers' Federation of Ontario

Teacher Working Conditions That Matter: Evidence for Change
is published by the Elementary Teachers' Federation of Ontario
Suite 1000, 480 University Avenue
Toronto, Ontario
M5G 1V2

Design by ARTIFACT Graphic Design

CONTENTS

1

CAN THIS REPORT HELP YOU?

Improving Student Learning

How do teachers' working conditions influence the performance of teachers and the learning of students?

Which working conditions have positive effects on teachers' performance and student learning? Which have negative effects?

What are some of the main causes or sources of teachers' working conditions?

Improving student learning is a responsibility shared by policy makers, administrators, teachers, parents, and students as well as by members of the wider community. While each of these groups has important contributions to make, what teachers do mediates the effects of almost all such contributions. And what teachers do depends on their motivations, capacities, and the conditions under which they work.

As North Carolina's governor recently put it, "Teachers' working conditions are students' learning conditions."[1]

Although most contemporary efforts to improve student learning

have targeted teachers' motivations and capacities, inadequate working conditions seriously undermine any potential these efforts may have. Without focused attention to the adequacy of teacher working conditions, in Ontario, for example, the current government's goal of increasing the proportion of elementary students achieving at least at level three on EQAO tests of literacy and math is extremely unlikely.

This review was undertaken to redress an imbalance in attention, at least in policy circles, to teachers' working conditions. A clearer understanding of the working conditions that enable teachers to do their best will also provide insights about how to support teachers' efforts to further develop their abilities and motivations. It is a win-win situation.

What teachers do, according to a particularly useful model for explaining workplace performance developed in 1996 by J. O'Day and B. Rowan, is a function of three interdependent variables: motivations, abilities, and the **working conditions,** or the situations in which they work.[2]

The interdependence of these variables means that each has an effect on the other two. So, for example, a teacher with high ability but low motivation will not achieve a high level of teacher performance. Poor teacher performance will also result from high ability and high motivation in a dysfunctional work environment. Furthermore, **poor working conditions will likely depress initially high levels of both ability and motivation.**

While the interdependencies highlighted by this model may seem self-evident, just think about all of the substantial efforts to improve schools and student learning that have focused on only one of these variables, or on only one at a time.

The currently popular teaching standards movement assumes that teacher performance will improve if only teacher capacity or **ability** changes.

High-stakes accountability policies, especially those with a

market orientation, assume performance will change if only teacher **motivation** changes.
Both of these reform efforts often have been pursued within a less-is-more financial framework, the consequences of which have had substantial negative effects on teachers' **working conditions.**

Cutting-edge theories of human learning view learning as situated.[3] This means that our most sophisticated explanations of how people learn have moved away from exclusively inside-the-head accounts and now acknowledge a significant role for the immediate situation in which the learner (in this case, the teacher) finds herself, as well as the larger social and cultural context in which that situation is embedded.

Initiatives that make it easier for teachers to do their work the best way they know how typically pay off for students' learning. Lack of resources, crowded and depressing physical facilities, too much paperwork, disruptions to instruction, impossible numbers of curricular expectations, excessive marking — no research is required to appreciate how conditions such as these get in the way of teacher professional learning, impede effective use of that learning, and seriously erode teacher motivation. But many less obviously consequential working conditions have important effects, both positive and negative, on teachers and students.

Methods

This report reviews two types of research. The first is theory-oriented research framed by psychological and socio-psychological explanations of human behaviour. The reports reviewed are wide ranging and often based on general interest in human functioning in the workplace. The causes and effects of teachers' thoughts and feelings and how these can affect a teacher's work in the classroom are examined.

The second set of research reviewed is less theoretical and

substantially more pragmatic, and is based on specific evidence about teacher working conditions. These inquiries are action oriented and have been generated primarily by, or for, teacher federations and unions. The results of the review of the action-oriented research are combined, or synthesized, with those of the theory-based research. It is out of this synthesis that observations are made and conclusions are drawn about working conditions that matter for teachers and students.

Framework

Teachers' internal states — thoughts and feelings — are at the centre of this review's understanding of teacher working conditions and their effects. This approach is illustrated in Figure 1 and is the guiding framework. Evidence points to the importance of eight specific internal states pertaining to teachers:

- sense of individual professional efficacy
- sense of collective professional efficacy
- job satisfaction
- organizational commitment
- levels of stress and burnout
- morale
- engagement in the school or profession
- pedagogical content knowledge

What teachers actually do in their schools and classrooms depends on how teachers perceive and respond to their working conditions, which is why these internal states are central to the review.

The most direct effects of teachers' thoughts and feelings on student learning come from teachers' school-wide and classroom-based practices. Teachers' thoughts and feelings also give rise to their decisions about whether to continue working in their current school, seek employment in another school, or leave the profession altogether. The decision of a talented teacher to leave the profession, obviously, seriously affects student learning.

FIGURE 1

Working Conditions and Student Learning

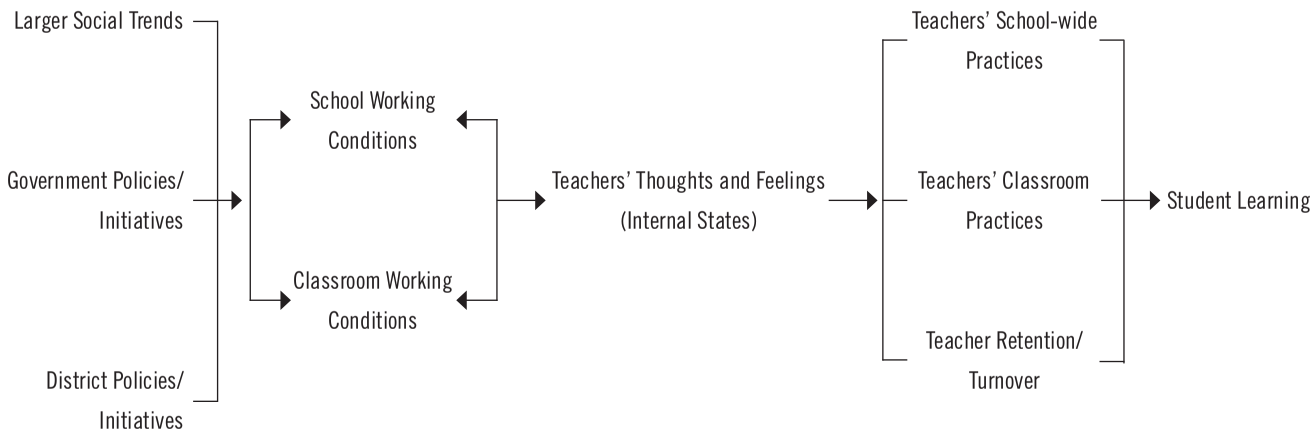


Figure 1 identifies four outcomes of teachers' working conditions, the first three are teachers' classroom practices, school-wide practices, and teacher retention or turnover. The fourth — student learning — is a consequence of the first three, among other things.

Teachers' classroom practices or performance: Such practices include everything a teacher does in the classroom environment to manage the behaviour of students and to foster their learning — for example, establishing routines and expectations, designing the physical space and scheduling the use of time, planning and delivering instruction, providing suitable learning materials, monitoring student learning, and providing feedback to students and parents

Teachers' school-wide practices or performance: Teachers engage in many professional activities outside their classrooms in order to maintain the school organization and to ensure that the school experiences of students are coherent and productive. Teachers, for example, collaborate with one another in the planning of instruction, act as members of school improvement planning teams and school councils, provide advice to administrators on a wide range of issues, and frequently both lead and staff the co-curricular program of the school.

Teacher retention or attrition: Teachers' intentions and actual decisions about continuing in their current school, moving to another school, or quitting the profession altogether are a particularly important outcome in light of the long-standing, but recently quite urgent, concern about teacher shortages and turnover. Identifying the working conditions influencing such decisions should help determine how to go about retaining sufficient numbers of talented teachers.

Student outcomes: These include student learning, however narrowly or broadly conceived and measured, along with students' attitudes toward school and their own learning.

Figure 1 illustrates teachers' thoughts and feelings — their internal states — as influenced by three categories of working conditions: school working conditions, classroom working conditions, and external influences of larger social trends, and government and district policies.

The key set of working conditions that teachers encounter are those in their classrooms. But because teachers' work is not confined to the classroom, conditions found in the school, such as supportive principal leadership, are important influences on their work both inside and outside the classroom. And the third category, that of external influences, is important because a significant proportion of teachers' school and classroom working conditions are a product of policies, practices, and other initiatives arising outside the school.

Districts, provincial governments and their education ministries, unions, as well as wider social forces help directly to provide the working conditions of teachers. They are also very influential in shaping these conditions.

For example, the testing and accountability policies that have been widely implemented in many education systems over the past 10 years have changed the culture of some schools, increased competition among teachers in other schools, and in some jurisdictions — such as Ontario — have seriously undermined the status of the profession in the public's mind. This external influence has given rise to a working condition that has a serious impact on teachers' thoughts and feelings and, therefore, on what they do.

How This Report Can Help You

This book is designed to be useful and accessible. It must also be authoritative and trustworthy. Throughout, major sources are included in the text. When the information included in the text is sufficient to identify the source, a citation endnote is not added and full reference information can be found in the extensive reference list. Wherever the source is not completely clear, or in the case of direct quotations, there is an endnote.

And, in some cases, there are extended explanations in the notes.

Following a review of the research and a discussion of the observations and results, recommendations for improving teachers' working conditions are offered. Before making these recommendations, this report reviews the reasons for them, with good, strong evidence to back up the arguments. You will need this evidence so that if you go forward with any of these recommendations, you will do so with confidence. There are recommendations for teachers, policy makers, teachers' unions and federations, and administrators, with an emphasis on school principals. This report is written to be an aid to enhancing the teaching environment and the learning experience of students. It is for everyone who cares about education.

2

HOW DO WORKING CONDITIONS AFFECT TEACHERS?

How do teachers' working conditions influence the performance of teachers and the learning of students? Which working conditions have positive effects on teachers' performance and student learning? Which have negative effects? What people do depends on what they think and feel — their internal states. The material, social, cultural, and technical conditions of work influence a very large proportion of people's overt actions no matter the job or person, depending, it should be stressed, on their perceptions and reactions to those conditions.

Such perceptions and reactions include, for example, the sense teachers make of their working conditions, the purposes they believe their working conditions are designed to serve (as in educational or political), how they feel about them (like or dislike), what they believe about their source (is it credible or not), and the motives they attribute to those responsible for their working conditions (as in student welfare or narrow self-interest).

Some working conditions will have quite positive effects on one or more internal states, and some will have negative effects. Teachers' performance will be influenced accordingly. Evidence points to the influence on teachers'

work and, in some cases, also on student learning, of eight specific internal states. Six of these states are largely ***affective*** in nature:

- individual teacher efficacy
- collective teacher efficacy
- teacher job satisfaction
- organizational commitment
- stress/burnout
- morale

The last two states are largely ***cognitive*** in nature:

- engagement or disengagement from the school or profession
- pedagogical content knowledge

Both of these last two states are strongly influenced by the first six affective states, in particular satisfaction and commitment.

Each of the states has significant effects on what teachers do and each state is unique in some important way. Nonetheless, there are overlaps and interactions among them. For example, one significant line of research suggests that teacher commitment is a consequence of satisfaction. Just as it is clear that teacher morale and satisfaction have important relationships with one another, few of us would assume there to be complete independence in individual and collective teacher efficacy.

Evidence about the antecedents, or causes, of each of these internal states typically identifies a range of variables in addition to working conditions. Personal traits such as teachers' locus of control, or such demographic characteristics as teachers' age, experience, and education are examples of these variables. Antecedents of this sort are not awarded much attention in this review unless they demonstrably influence the effects of working conditions on teachers and students. The majority of evidence, however, seems to indicate that working conditions typically outweigh or wash out the effects of these personal and demographic variables.

The discussion of each state includes:

(a) a synopsis of the ***evidence*** on which the discussion is based

(b) a description of how the internal state is defined or ***conceptualized*** for purposes of research
(c) a summary of the ***effects*** of the internal state on teacher performance and/or student learning
(d) an outline of the working ***conditions*** known to influence that internal state

Individual Teacher Efficacy

EVIDENCE. The extensive body of research that has accumulated by now about individual teacher efficacy indicates that it is significantly shaped by teacher working conditions and has large effects on both teacher performance and student outcomes. Evidence for our review of this internal state is provided by 16 empirical studies, published between 1976 and 2001, and five reviews of literature. Four of the five reviews, published over the past decade, summarize evidence collected from teachers only, while one, published a decade and a half ago, synthesizes evidence about the efficacy of employees primarily in non-school organizations.[1]

This review of teacher self-efficacy research relies especially heavily on A. Bandura's 1997 theoretical work published in *Psychological Review;* the comprehensive reviews of theory and research by M. Tschannen-Moran, A. Woolfolk Hoy, and W. Hoy in 1998; and by J. A. Ross in 1995; along with the systematic accumulation of exceptionally high-quality empirical evidence collected through the ongoing program of research by Ross and his colleagues primarily with Ontario elementary teachers.[2]

CONCEPT. The concept of individual teacher efficacy has been defined as "the extent to which the teacher believes he or she has the capacity to affect student performance."[3] It is a belief about one's ability to perform a task or achieve a goal. Such efficacy may be relatively general, as in the teacher's belief about her instructional capacities with all children and all curricula. Or, it may be specific, as in the teacher's belief about her ability to teach a specific concept such as evolution, to a specific type of student such as grade 6 students. To be clear, it is a **belief** about

one's ability or capacity **not one's actual ability** or capacity.

Individual self-efficacy beliefs are associated with other thoughts and feelings. For example, research on organizational commitment in non-school contexts finds strong positive relationships between self-efficacy beliefs (conceptualized and measured as "perceived personal competence") and employees' organizational commitment. Similar results are found among teachers. There is also evidence that low levels of teacher self-efficacy are associated with feelings of stress.[4]

EFFECTS. Bandura argues that belief in one's ability to perform either a specific task or a more general domain of tasks has a strong influence on the amount of effort one expends, how long one persists in trying to accomplish a task, how resilient one is in the face of failure, and how well one is likely to cope with stress under demanding circumstances. This theoretical argument receives considerable support from empirical research with teachers.[5]

Evidence associates higher levels of teacher efficacy with many dimensions of teacher performance in the classroom. High levels of individual teacher self-efficacy are associated with a number of quite positive teacher behaviours.[6] For example, with regard to interactions with students:

- persistence in helping those struggling arrive at correct answers and a decreased tendency to be critical of incorrect responses
- increased chances of treating students fairly
- increased willingness to work with students experiencing difficulty
- development of warm interpersonal relationships in the classroom
- increased tendency to persist with a student failing to understand a concept

For example, with classroom instruction:

- greater likelihood of grouping students for instruction
- promotion of expectations for achievement in the classroom

- increased chances of experimenting with instruction
- greater willingness to try a variety of materials and approaches
- greater likelihood of implementing innovative practices
- better planning and organization for instruction
- increased tendency to recommend placing lower socioeconomic status students in a regular classroom

For example, with general practices:

- openness to educational consultation
- positive attitudes toward educational reform
- job satisfaction
- increased levels of parent involvement in school

A gradually accumulating body of evidence associates higher levels of individual teacher self-efficacy with higher levels of student achievement (particularly in math and reading in the elementary grades) across diverse student populations, with more positive attitudes toward school, subject matter, and teachers, and with lower rates of suspension and dropouts.[7]

Higher levels of teacher self-efficacy are associated with higher levels of student self-efficacy, an important mediator of student learning. For example, a 2001 two-year study by J. Ross, A. Hogaboam-Gray, and L. Hannay examines the effects of a specific form of teacher efficacy, computer confidence, on students' computer skills and students' self-efficacy. Evidence for the study comes from 387 students ages six to nine in 97 classrooms in 46 schools. Ross and his colleagues find that students who move from a teacher with low computer confidence to a teacher with high computer confidence benefit significantly more from an infusion of technology than students moving from a teacher with high computer confidence to a teacher with low computer confidence. The benefits are improved student self-efficacy as well as greater acquisition of computer skills.

Low levels of teacher self-efficacy are associated with an increased probability of leaving the profession.[8]

CONDITIONS. Tschannen-Moran and Barr's article, "Fostering Student Achievement: The Relationship between Collective Teacher Efficacy and Student Achievement," which contains a summary of empirical evidence, identifies the following school conditions contributing to individual teacher efficacy:

- positive school atmosphere
- academic press among staff
- sense of community
- participation by teachers in decisions affecting their work
- lack of barriers to effective instruction
- high expectations for students
- collaboration among teachers

J. Ross, S. McKeiver, and A. Hogaboam-Gray's "Fluctuations in Teacher Efficacy during Implementation of Destreaming" is a particularly good example of the results of research about the influence of **teacher collaboration.** This is a qualitative study with four exemplary grade 9 teachers in which teacher efficacy is viewed as a dynamic variable. Results of this study indicate that the introduction of a destreaming policy initially has negative effects on teachers' sense of efficacy. However, as students begin to demonstrate learning comparable to, or better than, their learning in streamed classrooms, teacher efficacy recovers. The working conditions accounting most for this recovery are teachers' collaboration with their peers and a timetable that permits such collaboration. Through collaborative peer relationships, teachers learn new strategies for teaching mixed-ability students, receive emotional support, and reduce their workload by not having to reinvent solutions already developed by their colleagues.

Principals' leadership emerges in most studies as a strong influence on teachers' self-efficacy beliefs. Characteristics associated with such leadership include being influential with district superordinates, providing resources for teachers, buffering teachers from disruptions, allowing teachers discretion over classroom decisions, and minimizing student disorder. Principals also seem to have a positive influence on

teacher efficacy by helping to develop a shared and inspiring sense of direction for the school, modelling appropriate behaviour, and rewarding teachers for good work.[9]

Some **district conditions** have been associated with teacher efficacy. For example, Ross, Hogaboam-Gray, and Hannay's study of computer implementation in the classroom detected a significant influence on teacher efficacy by well-designed district in-service experiences. In this case, "well-designed" means that the in-service experiences are individualized for teachers, and distributed throughout the implementation period; lead to the establishment of in-school networks; and provide support for instructional rather than hardware issues.

Collective Teacher Efficacy

EVIDENCE. There is a relatively small body of research about collective teacher efficacy, reflecting the recentness of interest in the concept. Although the evidence base is small, it is nevertheless generally of good quality and provides quite robust results. Evidence for this section is based on seven original empirical studies, published between 1998 and 2005, along with two recent reviews of research focused on teachers and schools.[10]

CONCEPT. Group or collective efficacy is analogous to, and grows out of, the same theoretical grounding as individual teacher efficacy, a grounding substantially developed by Bandura in 1997. Collective efficacy in schools "refers to the perceptions of teachers in a school that the faculty as a whole can execute the courses of action necessary to have positive effects on students."[11]

The positive effects of collective efficacy beliefs on the performance of a group of teachers are explained by how those beliefs shape teachers' behaviours and norms. People working in organizations do not function in isolation. So when most teachers in the school believe that together they can be successful in teaching their students, there is a high level of social pressure on all teachers to persist in their attempts to do so. While initial efforts may be unsuccessful, persistence creates opportunities

for ongoing problem solving and the refinement of teaching practices until they are successful.

The most fully developed model of collective teacher efficacy assumes that it is both task and situation specific.[12] This means that teachers' sense of collective efficacy depends not only on the nature of the task to be accomplished — for example, implementing the government's new primary literacy curriculum — but also on key features of the context in teachers' work — for example, the proportion of ESL students in the school and the extent and quality of relevant professional development they expect to receive from the district.

EFFECTS. Differences among schools in the strength of collective teacher efficacy are associated with variations in both mathematics and reading achievement in four studies. The most recent of these studies was carried out in 66 Virginia urban, suburban, and rural middle schools where Tschannen-Moran and Barr found significant effects of teacher collective efficacy on grade 8 students' writing achievement after controlling for students' socioeconomic status; no effects on math and English achievement were detected, however.[13]

CONDITIONS. There are a number of sources of teachers' sense of collective efficacy,[14] the last on this list, **teachers' prior experiences of success or mastery**, being the most important, with a school's past successes and failures likely also having a significant effect on teachers' feelings of efficacy in approaching new challenges. Collective mastery experiences far outweigh the effects of student prior achievement and student demographic characteristics such as socioeconomic status, race, and ethnicity.[15] Sources of collective teacher efficacy include:

Vicarious experiences – such as observation of other groups of teachers successfully engaged in efforts to address issues considered salient to one's school.

Social persuasion – colleagues or those in leadership roles may persuade a group of teachers that they have the capacities to address new challenges successfully.

Teachers own affective states – high levels of stress, perhaps even reaching states of burnout for some group members, will seriously diminish the group's sense of collective efficacy.

Teachers' prior experiences of success or mastery.

Conditions in the school that are associated with teachers' collective efficacy are reflected especially well in a 2004 study. This study was carried out with 2,170 Ontario elementary teachers in 141 schools. In addition to the effects of student prior achievement, the study found significant effects on teacher collective efficacy of "school processes that promoted teacher ownership of school directions."[16] Evidence of this study and others suggests that mastery experiences for groups of teachers are a function of a number of working conditions including:

- significant participation in school decision making and shared, school-wide decision making
- shared school goals
- the fit of school improvement plans with teachers' perceptions of school needs
- clear and explicit goals for judging the group's success
- empowering and strong leadership that creates a sense of common purpose or vision for the school
- feedback on the group's performance, perhaps by school or district leaders

Principals play an important role. Empowering principal leadership practices, or what are now commonly called transformational leadership practices, are found to have a significant impact on teachers' collective efficacy and both direct and indirect effects on teacher commitment to school and to community partnerships. Practices empirically associated with collective teacher efficacy are:[17]

- seeking creative ways to improve instruction
- listening to teachers
- promoting innovative teaching
- engaging teachers in school improvement decisions
- creating a positive and supportive school climate

- identifying those perceived to be instructional leaders
- identifying those perceived to be influential with superiors

Job Satisfaction

EVIDENCE. The amount of evidence concerning job satisfaction is both large and mature. This section is based on 12 empirical studies published between 1998 and 2004, along with five reviews, the oldest published by Locke in 1976, the most recent by Schnake in 1991.[18] None of the reviews specifically focus on the job satisfaction of teachers, whereas this is the focus of all but one of the original studies.

CONCEPT. Job satisfaction has been variously defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences"; "a state of mind determined by the individual's anticipation of the extent of satisfaction of those needs which s/he perceives as significantly affecting his/her work situation"; and the "degree to which an employee has positive emotions toward work."[19]

EFFECTS. Considerable evidence indicates that job satisfaction has a strong direct effect on teacher retention. A much smaller corpus of evidence points to a significant indirect effect of job satisfaction on student learning. Substantial evidence collected in non-school contexts warrants the inference that job satisfaction has important effects on teachers' school-wide behaviour, but there is little direct evidence speaking to this inference.[20]

For many years, research in different organizational contexts portrayed the relationship between job satisfaction and performance — such as could be measured by student learning, for example — as weak. But evidence giving rise to this portrayal typically resulted from studies that viewed satisfaction and performance as individual level variables. More recent evidence examining these relationships at the organization level finds much stronger relationships. Ostroff's 1992 study, for example, carried out with a large sample of teachers in junior high and secondary schools, finds job satisfaction to be the best

predictor of student achievement among all the attitudinal variables measured.[21]

Ostroff also finds a strong relationship between teachers' job satisfaction and their intention to quit the profession. This finding echoes a significant body of research conducted in both school and non-school settings about the relationships among job satisfaction, organizational commitment, and both the intent to leave the job and the actual behaviour of leaving.[22]

Another line of research (conducted mostly in non-school contexts) suggests that job satisfaction, arising from employee's conceptions of fairness in the exchange relationship — in other words, the range of rewards provided for work — and generally positive feelings about their work, are significantly associated with spontaneous, voluntary actions described as "organizational citizenship behaviours." Although not formally prescribed in a job description or an employment contract, organizational citizenship behaviours are highly desirable, if not essential, for the effective functioning of the organization.[23]

In relation to Figure 1, organizational citizenship behaviours encompass many of those school-wide performances in which teachers engage, especially those unassigned duties not formally specified in a teacher's contract. There are many examples to choose from in the case of teachers — assuming the personal cost of ensuring adequate instructional resources in the classroom when the school budget is tight, volunteering to oversee the school recital, spending extra time with an especially needy student before and after school each day; the list could be quite long.

CONDITIONS. Among the most useful sources of evidence about working conditions that contribute to teacher job satisfaction is a series of coordinated international studies carried out with both elementary and secondary teachers by S. Dinham and C. Scott and conducted by teams in Australia, New Zealand, and England.

This study and others challenge a prevailing two-factor theory that proposes a mutually exclusive set of job satisfiers and dissatisfiers: job

satisfiers or motivators contained in the work itself — mostly what happens in the classroom — and job dissatisfiers attributed to broader working conditions in the school such as interpersonal relations with peers, supervisory practices, and school policies.[24]

Dinham and Scott challenge the mutually exclusive nature of the satisfiers and dissatisfiers; they find that getting rid of a dissatisfier increases job satisfaction. They also identify a set of satisfiers outside of the school context entirely. They term this a "third, outer domain of teacher satisfaction."[25] Their evidence suggests that:

Conditions in the classroom under the teacher's control are generally associated with job satisfaction; for example, the intrinsic rewards of teaching such as working with students and seeing them achieve, as well as rewards associated with increasing one's own professional abilities.

Conditions in the wider social and government sphere, what Dinham and Scott term as their third domain, generally have a negative effect on teachers' job satisfaction. These conditions include society's views of teachers and their status, government efforts to control and shape education including the pace of educational change, its management, and related issues of workload.

Conditions in the school, such as leadership, decision making, school climate, communication, resources and local reputation of the school, have the potential either to enhance or diminish teachers' job satisfaction, depending on their nature.

In all three countries in which this series of studies was carried out, **variation in workload** was the aspect of teaching most strongly associated with overall levels of teacher job satisfaction. Differences across countries also indicated that the context of teachers' work, such as new policies and practices introduced by those external to the school, have a significant impact on job satisfaction.[26]

Evidence from a sample of five quite recent studies illustrates

the support available for Dinham and Scott's 1998 claims about the potential contribution to teacher job satisfaction — either positive or negative — of school-level conditions. J. Stockard and M. Lehman use data from the 1993 to 1995 nationwide U.S. *Schools and Staffing Survey*, along with the *Teacher Follow-Up Survey*, and some additional survey data in one state. Results of their study indicate that **lower levels of satisfaction are associated with more challenging classes of students, teaching assignments outside one's area of certification, and inadequate supplies**.

But the effects of these dissatisfiers diminish considerably when conditions in the school include supportive relationships with teaching colleagues, effective and supportive principals, opportunities to influence decisions about school policy, and control over classroom decisions.

Guided by job-enhancement theory,[27] G. Crow and D. Pounder, in "Teacher Teams: Work Group Enhancement," and D. Pounder, in "Teacher Teams: Exploring the Job Characteristics," compare the job satisfaction of teachers working in teams with teachers not working in teams. Data collected through observations, interviews and surveys indicate **significantly greater satisfaction for teachers working in teams.**

Still retaining the distinction between satisfiers and dissatisfiers, C. Rhodes, A. Nevill, and J. Allan, in "Valuing and Supporting Teachers," report responses by 368 English primary and secondary teachers to 40 factors potentially influencing their job satisfaction. Among the eight factors identified by at least 90% of respondents as "deeply satisfying," six are school-level factors, and two are at classroom level:

- teachers work together to achieve a shared goal
- staff are friendly
- teachers share experiences with one another
- the school works hard to make learning more effective
- the school values contributions by its members
- there is a climate of achievement in the school
- classrooms stimulate pupil learning
- classrooms have an atmosphere conducive to learning

None of the factors claimed to be "deeply" dissatisfying by at least 90% of respondents are classroom level, and most are school-level factors:

- the impact of a new performance-management policy
- society's view of teachers
- proportion of time spent on administration

Finally, in his survey of a nationally representative sample of U.S. teachers, Ingersoll finds teacher dissatisfaction to be among the primary reasons for teachers leaving the profession; the others are retirement, school staffing action, personal issues, and alternative employment.[28] About a quarter of all public school teachers in his sample identify dissatisfaction as a reason for their turnover. Among the causes of dissatisfaction for those who stayed in the profession but changed schools, most are clearly school-level conditions and the remaining could be ameliorated in part through school-level action. In order of strength, the conditions are:

- poor salary (47% of respondents to the survey)
- inadequate administrative support (38%)
- student discipline problems (18%)
- lack of faculty influence (13%)
- lack of community support (12%)
- unsafe environment (11%)
- lack of student motivation (10%)

Ten percent of teachers in the Ingersoll studies also believe inadequate time to prepare is an important source of dissatisfaction. But these results seem to dramatically underestimate the importance of this variable if recent evidence from Newfoundland and Labrador teachers is any indication. D. Dibbon finds that adequate preparation time is the strongest predictor of job satisfaction among the 681 teachers in his sample.

Results of these studies are generally consistent with Dinham and Scott's claim that school-level working conditions can serve to either enhance or diminish teachers' job satisfaction. **Based on these studies, there is also evidence that school-level working conditions**

are especially powerful sources of satisfaction. This is noteworthy because many of these conditions can be improved with the intervention of effective leadership.

Evidence about teacher's job satisfaction identifies many conditions in the classroom and school with the potential to erode such satisfaction. A recent study of teachers in Prince Edward Island, for example, finds significant differences in job satisfaction between teachers with classes ranging from 16 to 30 students, as compared with teachers whose classes exceed 30 students.[29] Furthermore, some evidence suggests a serious decline in job satisfaction among teachers over the past half dozen years.

In spite of this fairly gloomy evidence, in 2005 Matsui reported that although Ontario elementary teachers generally felt overworked, stressed, and not hopeful about their working conditions improving any time soon, almost all "were either very or somewhat satisfied with their current teaching position."[30] Such evidence suggests that the intrinsic satisfactions that come from helping children learn dominate the factors influencing teachers' job satisfaction.

Organizational Commitment

EVIDENCE. This discussion of teacher commitment is based on three reviews of research. V. Dannetta's review is exclusively focused on teachers, while the other two, by J. Mathieu and D. Zajac, and by T. Wright and D. Bonett, are primarily focused on other employee groups. This section also reflects evidence from 16 original empirical studies, eight of which were undertaken exclusively in schools from 1989 to 2005.

CONCEPT. Commitment has been defined as "a psychological state identifying the objects the person identifies with or desires to be involved with."[31] Research on teacher commitment distinguishes three categories of such objects — the student, the profession, and the organization — each of which generates its own more specific definitions.

Teachers' commitment to students and their learning is defined as "a sense of efficacy, the expectation that students will learn and the willingness to put forth the effort required for student learning to occur."[32]

Teachers' commitment to the profession is defined as "…a positive, affective attachment to one's work."[33]

Teachers' organizational commitment is defined as "a three-dimensional construct including a strong belief in, and willingness to accept, the organization's goals and values; loyalty and a willingness to exert considerable effort on behalf of the organization; and a definite desire to maintain organizational membership."[34]

Organizational commitment and **job satisfaction** are closely related states. Some evidence suggests job satisfaction causes organizational commitment and that working conditions have indirect effects on commitment through their influence on job satisfaction. But there is contrary evidence. Organizational commitment, this evidence seems to suggest, develops first as a sort of precondition of job satisfaction.[35] Compared to organizational commitment, job satisfaction is believed to be less stable and to vary more directly and quickly with changing work conditions.

Job commitment and **job attachment** are concepts similar to organizational commitment. Job commitment is "the extent to which an employee perceives that he or she is connected to a job and involves feelings of psychological attachment, independent of affect."[36]

EFFECTS. Teacher commitment is identified as a contributor to student achievement in a relatively small number of studies. A more substantial body of research, however, links greater organizational commitment to employee retention, job search activities, absenteeism, and perceptions of organizational effectiveness.[37]

Job performance also seems to be moderately influenced by organizational commitment. A good example of research providing such evidence is Wright and Bonett's meta-analysis of 27 studies

including a total sample of 3,630 teacher and non-teacher participants. While organizational commitment is significantly related to job performance, this relationship declines exponentially as employees' tenure lengthens.[38]

This finding is in opposition to career development theory that assumes increased tenure is associated with increased commitment because of the accrual of increased benefits (pension benefits, for example). But these results are consistent with a view of teaching as a career that is relatively flat (i.e., financial rewards maximize early; the nature of the job often remains static for many, although the students keep changing; and there is often little recognition or reward for greater expertise and experience).

CONDITIONS. A substantial body of research about the causes of commitment, most of it conducted in non-school settings, is guided by expectancy and social exchange theories.

Expectancy theory assumes that employees enter the organization with expectations and values about the organization and the nature of their workplace. Expectations are beliefs about what conditions will characterize the workplace. Values are employees' conceptions of desired outcomes in the workplace. To the extent that the expectations and values of employees are met, positive emotions, such as satisfaction toward their work and commitment to the organization develop.

According to social exchange theory, satisfaction and commitment develop through an exchange of employers' rewards for employees' work. So work orientations are influenced by the degree to which the employer is perceived to provide desired rewards.[39]

Research about organizational commitment conducted with teachers reflects many of the results of previous studies, but extends these results in ways that reflect the unique qualities of teaching and schools.[40] In addition to providing original evidence of his own from Ontario teachers, Dannetta also provides a comprehensive review of empirical evidence about factors influencing teachers' commitment to student learning. There is considerable overlap with the results of his

review and those of his own study employing both interview and survey methods. Dannetta's review provides the core of the evidence reported here, supplemented with a sample of other relevant original studies.

With respect to teachers' **role states** (how teachers perceive the actual state of their role as teachers), Dannetta's review provides consistent support for the negative effects of excessive workload on teacher's commitment. It also indicates that the perceived fairness of the workload, not just the amount of work, has an important bearing on teachers' commitment. Teachers, like other employee groups, are more committed to their organizations when they have the autonomy and discretion to shape their work the best way they know how and when they experience little role conflict — when they believe in and accept the value of pursuing their school's goals.

In relation to teachers' **job characteristics**, Dannetta's review finds substantial indications that organizational commitment is strongly influenced by teachers' perceptions of the meaningfulness of their work along with opportunities for ongoing learning and professional growth. Others report effects on teachers' organizational commitment due to perceptions that the job is doable but challenging, the amount of feedback provided to teachers about their performance, and the amount of social interaction and role conflict that they perceive.[41]

With reference to **group/leader relations**, Dannetta finds commitment to be positively influenced by the quality of administrators' leadership, including their flexible enforcement of rules, buffering of teachers from external distractions, the support they provide to faculty, and their ability to influence district leaders. Commitment also increases when there are smaller work groups, a sense of community with colleagues and administrators, and opportunities to participate in decisions.

Other recent evidence echoes Dannetta's results about group/leader relations. For example, K. T. Tsui and Y. C. Cheng's study of 423 Hong Kong teachers finds that **organizational commitment** was significantly influenced by principals' consideration behaviours. Teachers' commitment is more positive when principals are friendly,

open to teachers' suggestions, supportive, and collegial, and when the principal looks out for the welfare of faculty members. Teachers with relatively short tenure are more influenced by this condition than are teachers with longer tenure. To these leadership characteristics fostering teacher commitment, S. Nguni, P. Sleegers, and E. Denessen's study adds the provision of a shared vision as a key dimension of transformational approaches to leadership. Nir also provides evidence of the significant relationship between teachers' organizational commitment and supportive principal behaviour.[42]

On the matter of **organizational conditions**, Dannetta finds that teachers' organizational commitment is reduced by the extra demands on time and energy imposed by government initiatives, such as the implementation of new curricula. It is also reduced by excessive tension in the organization created by struggles over competing priorities. Positive organizational conditions include an orderly school climate and the school's efficient and effective management of student behaviour.

Additionally, Tsui and Cheng find that teacher commitment is higher in schools with "institutional integrity." These are schools with well-developed programs suiting the student population, along with the ability to cope successfully with destructive outside forces. The commitment of married teachers, in particular, is influenced by this condition, perhaps because of their competing family commitments and feelings of greater vulnerability to unreasonable demands from parents and other community members.

Stress and Burnout

EVIDENCE. Evidence about teacher stress and burnout described in this section comes from two reviews of research and 17 original empirical studies published from 1974 to 2003.[43]

CONCEPT. Burnout, a term first introduced by H. J. Freudenberger, is used to define the more extreme forms of stress experienced by those who work in interpersonally intense occupations (human services for

the most part) that are subject to chronic tension. The term signifies the inability of people to function effectively in their jobs as a consequence of prolonged and extensive stress related to those jobs.[44]

Stress and burnout are closely related states of mind. A. G. Dworkin argues that the greater the level of stress, the greater the level of burnout. However, once burnout has reached a high level, it may actually reduce stress. "In essence, burnout becomes a coping mechanism through which teachers cease to care and thereby experience reduced stress."[45]

C. Maslach and S. E. Jackson, authors of a widely used tool for diagnosing burnout, claim that it is a three-dimensional state of mind:

Feelings of emotional exhaustion or wearing out – teachers no longer feel able to devote themselves to their students to the same extent they had earlier in their careers.

Depersonalization – teachers develop negative, cynical, and callous attitudes toward students, parents, and their teaching colleagues.

Reduced sense of personal accomplishment and esteem – teachers no longer believe themselves to be effective in helping their students to learn and in accomplishing their other duties.

EFFECTS. Burnout has significant negative effects on teachers, their schools, and their students. Teachers suffering from excessive stress or burnout tend to demonstrate increased absenteeism and a decline in classroom performance, as well as poor interpersonal relations with colleagues and students. These teachers are less sympathetic toward students, and less committed to and involved in their jobs. They have a lower tolerance for classroom disruption, are less apt to prepare adequately for class, and are generally less productive.[46] Burned-out teachers can have a chilling effect on the morale of new teachers.

Teachers experiencing burnout tend to be more dogmatic about their practices and resist changes to those practices. They are also inclined to treat students in a depersonalized way and to resort to victim blaming for low achievement or failure.

Dworkin summarizes evidence indicating that high-achieving

students placed with teachers suffering from burnout achieve 20% less over the course of a year than do students placed with other teachers. Burnout also is associated with higher rates of student dropout. And while it is strongly associated with the intent to quit teaching, it is only weakly related to actual quitting. As Dworkin explains:

> Those in teaching, especially elementary education, have little job training that can be translated into careers outside of teaching that involve work with the adult population. Thus, many burned-out teachers are unable to find work in the private sector that pays comparable salaries, or that does not require substantial retraining.[47]

Unfortunately for these teachers and their students, this means many burned-out teachers remain in schools. Estimates of the prevalence of burnout or excessive feelings of stress across the teaching population are actually quite alarming, ranging from 15 to 45%.[48]

CONDITIONS. This section captures what we know about the range of working conditions influencing teacher stress and burnout. Results of a single empirical study, carried out with Ontario teachers by B. M. Byrne, are described first; these results represented quite well what was known about the causes of teacher burnout up to 1991. This discussion is followed by a summary of the results of a review of empirical research published by K. Leithwood and colleagues in 1996, including evidence published before the Byrne study, as well as in the subsequent five years. A review of studies published after 1996 failed to identify any causes of teacher stress and burnout beyond those included in the 1996 review.[49]

Key working conditions that either contribute to, or help ameliorate, burnout among Ontario teachers were the focus of the study by Byrne. Quantitative evidence for this study was collected from a total of 423 urban teachers in six elementary schools, six intermediate schools and four secondary schools. Table 1 displays the rankings of the most frequently identified working conditions contributing to burnout for each of these groups of teachers in response to an open-ended question

TABLE 1

Rank Order of Factors Contributing to Teacher Burnout

(adapted from Byrne, 1991)

Factors Contributing to Teacher Burnout	Elementary Teachers*	Intermediate Teachers	Secondary Teachers	
Excessive administrative paperwork	1	4	8	
Time constraints	2	2	1	
Number of students	3	1	7	
Parent expectations	4	3		
Extracurricular and supervisory duties	5	7		
Variation in students' ability and need	6			
Lack of support and recognition from administration and parents	7	8	4	
Excessive course load; ever-changing curriculum	8			
Multiple role expectations	9	6	10	
Student attitudes and behaviour		5	2	
Student discipline problems		9	9	
Apathy and increasing burnout among colleagues		10	5	
External personal factors			3	
Sense of powerlessness			6	

* Author reports only nine factors for elementary teachers but 10 for the other two groups

asking them "to list phenomena related to their work which they believed contributed most to feelings of stress."[50] As Byrne indicates, these factors are very similar to the results of earlier research and there is considerable agreement across the three groups of teachers about the importance of many of the same factors.

Five factors were identified by all three groups, with time constraints clearly the biggest contributor to stress and burnout, followed, in order, by the number of students for which the teacher was responsible, excessive administrative paperwork, lack of support and recognition, and multiple role expectations (for example, teacher, coach, mentor, advisor).[51]

Other important contributions to the stress and burnout of elementary teachers were, in order, excessive or unrealistic parental expectations, extracurricular and supervisory duties, the diversity of abilities and needs among students in one's classroom (identified only by elementary teachers), and excessive course loads along with constantly changing curricula to be implemented (also identified only by elementary teachers). Unlike elementary teachers, intermediate and secondary teachers experience considerable stress from student discipline, attitude, and behaviour issues.

Among elementary teachers in particular, Byrne's results also indicate that male teachers experience lower levels of emotional exhaustion than their female colleagues, and that teachers in the 40-to-49-year age range experience higher levels of personal accomplishment than do their younger colleagues.

Tables 2 and 3 summarize the results of a review of teacher burnout research published by Leithwood and his colleagues in 1996.[52] Eighteen empirical studies published from 1984 to 1995 that inquire about both organizational conditions and leadership practices influencing teacher burnout are included in the review. The left column of these tables lists conditions or factors, the right column indicates the number of studies, out of a total of 18, that identify each factor as a significant contributor to either increasing or reducing burnout. A substantial number of conditions are identified in only one study.

Table 2 lists a total of 13 organizational conditions and 13 leadership practices precipitating or exacerbating teacher stress and burnout. Among organizational conditions, the most frequently identified is student misbehaviour. Other organizational conditions identified in more than one study are work overload, excessive paperwork and pupil load, isolation, external pressure for change, and organizational rigidity. Among the leadership practices that exacerbate teacher stress and burnout in two or more studies are unclear or unreasonable expectations, inconsistent leadership behaviour, a non-participative style, failure to provide essential resources, lack of follow-through, and lack of support.

TABLE 2

Organizational Conditions and Leadership Practices Contributing to Teacher Anxiety, Stress, and Burnout

Conditions	Number of Studies
Organizational Conditions	
Student misbehaviour (discipline, absence, apathy, etc.)	7
Work overload (excessive paperwork, pupil load)	2
Isolation	2
Overdemand (reduced time for instruction)	1
Underdemand (excessive job prescription)	1
External pressures for change	2
Organizational rigidity	3
Role conflict and ambiguity	1
Inadequate access to facilities	1
Rigid rules for use of facilities	1
Hierarchical administrative structures	2
Lack of support	1
Excessive, unrealistic societal expectations	1
Leadership Practices	
Unreasonable expectations of teachers	4
Excessive emphasis on student achievement	1
Inconsistent behaviour and expectations	2
Non-participative leadership style/authoritarian	3
Failure to provide adequate instructional resources	2
Lack of follow-through	2
Lack of knowledge about teaching and learning	1
Poor teacher evaluation	1
Indecisiveness	1
Lack of support for staff	2
Favouritism	1
Harassment	1
Lack of trust in teachers' professional capacities	1

TABLE 3

Organizational Conditions and Leadership Practices That Reduce Teacher Anxiety, Stress, and Burnout

Conditions	Number of Studies
Organizational Conditions	
Support of friends, family, colleagues	7
Opportunities to share professional experiences	1
Recognition leading to advancement	1
Having an influence on decisions	5
Job security	1
Access to support staff	1
Adequate physical facilities	1
Relaxed, flexible use of facilities	1
Flexible administrative structures	1
Reduced workload	1
Opportunities for changing assignments	1
Clear job expectations	1
Leadership Practices	
Generally supportive and considerate	8
Provides emotional support	2
Supportive approach to appraisal (recognition, feedback, standards)	5
Provides direct assistance when needed	2
Facilitates access to information	1
Modest or balanced emphasis on student achievement	1
Value placed on integration with staff and assisting others	1
High levels of structure (clarity) and consideration	1
Participative leadership style	3

Table 3 summarizes organizational conditions and leadership practices that reduce the likelihood of teacher stress and burnout. By far the most frequently identified organizational condition is support from friends, family, and colleagues. Having an influence on decision

making in the school and class is also identified in multiple studies. This table also indicates that leaders reduce the incidence of stress and burnout when they are supportive and considerate and when they use a participative style of decision making in the school.

Morale

EVIDENCE. This section is based on evidence from three reviews of research and seven empirical studies. Two of the reviews were carried out in education contexts and one in a non-education context.[53] The original studies were published from 1991 to 2002.

CONCEPT. Common uses of the term suggest that morale is a generalized and relatively enduring state of mind. Good morale is typically associated with hopeful attitudes, an optimistic view toward one's colleagues, and enthusiasm for one's work, whereas poor morale is associated with cynicism, feelings of despair, and lack of enthusiasm.

Conceptions of morale used by researchers largely reflect this common usage. For example, P. Reyes and M. Imber consider morale to be "an employee's attitude toward working conditions, on the job services, personnel policies, and relationships with superordinates." L. Evans defines it as "a state of mind determined by the individual's anticipation of the extent of satisfaction of those needs which s/he perceives as significantly affecting her/his total work situation." As one of seven features of a healthy school, W. K. Hoy, C. J. Tarter, and R. B. Kottkamp consider morale to be "the sense of trust, confidence, enthusiasm and friendliness among teachers."[54]

Morale and job satisfaction are usually considered to be different but interdependent states of mind. Morale is more future oriented and anticipatory whereas job satisfaction is present oriented and a response to some current set of circumstances. A person who achieves his job goals or is making progress toward them should feel more confident about the future than one who is not so successful.

EFFECTS. Evidence associates teacher morale with a number of teacher

behaviours as well as student achievement. M. Zigarelli uses three sets of data taken from the U.S. *National Educational Longitudinal Study* to test the effects on student achievement of a small set of often-identified characteristics of effective schools. He finds little support for most of those characteristics, but high teacher morale is strongly associated with student achievement. Others report similar results.[55]

Examples of teacher behaviours associated with poor morale include less effective teaching performance, teacher absenteeism, and resistance to change. These are a result of poor morale's negative effect on attitudes, self-esteem, and self-concept. Poor morale is also associated with teacher turnover.[56]

CONDITIONS. Some evidence suggests that working conditions may have different effects on teacher morale and other internal states depending on teachers' years of experience. Beginning teachers, in particular, have fewer resources to fall back on if they find themselves in less than ideal circumstances, as they often do. This finding accounts for the focus on beginning teachers by E. Weiss. Her study uses data collected by the U.S. Department of Education through its *Schools and Staffing Surveys* administered in both the school years of 1997/1998 and 1993/1994. A total of 5,088 beginning teachers responded to these two surveys.

Results of this study indicated that the same working conditions influence not only beginning teachers' morale, but also their career choice commitment and their plans to remain or leave teaching. Teachers' perceptions of these working conditions outweigh other factors considered in the study including teacher demographic characteristics, academic background, and salary. These influential working conditions include:

School leadership: Good morale among beginning teachers' is associated with support and encouragement from principals. Such leadership includes clear communication of expectations, provision of instructional guidance and resources, recognition of good work, and enforcement of student rules of conduct.

Student behaviour/social climate: The morale of beginning teachers is significantly influenced by the nature and range of student problems encountered in their classes. Unsafe and disruptive school climates including tardiness, misbehaviour, and physical threats from students contribute to low morale.

Teacher autonomy and discretion: Professional learning and an internalized sense of responsibility and accountability for student learning are fostered in first year teachers who experience autonomy and discretion, such as having significant control over decisions about curricula, texts, forms of instruction, and disciplinary methods.

Working conditions associated with teacher morale in Weiss's study of beginning teachers are also reported in studies with more experienced teachers. In addition to these factors, positive teacher morale is associated with teachers' perceptions of the fairness of their workloads and opportunities for ongoing professional development.[57]

Based on both qualitative and quantitative evidence collected from teachers in Israeli elementary and secondary schools, Nir reports a negative effect on teachers' morale with the implementation of school-based management practices. A sharp drop in teacher morale occurs in the second year of implementation apparently due to increased internal pressures for accountability and the struggle for resources among teachers. These challenges are likely to have been, as Nir explains, significantly at odds with what teachers expected to happen with school-based management implementation.[58]

Engagement in the School or Profession

EVIDENCE. This section is based on evidence from one review of research,[59] and 15 original empirical studies conducted from 1986 to 2005.

CONCEPT. The concept of engagement or disengagement is used here as a means of bringing together the results of a line of research about the incidence of teachers changing schools or leaving the profession.

This evidence searches for the causes of attrition from schools or the profession in several of the internal states experienced by teachers, in particular, job satisfaction and organizational commitment.

EFFECTS. Recent reports of teacher attrition generally agree that it is fairly high. For example, J. Buckley, M. Schneider, and Y. Shang report that one quarter of all U.S. teachers leave the profession within four years; a 2005 Ontario study by Matsui found that one in three elementary teachers were actively considering leaving the profession. But the consequences of this attrition are far from obvious, except for the obvious problem of being unable to find sufficient numbers of replacements.

Taking a broad international perspective on the issue, D. Macdonald cites a number of clearly negative effects, including discontinuity of staff within schools engaged in systematic improvement initiatives, reduction in quality of teaching staff when the most qualified leave in disproportionately large numbers, and an aging profile of teachers when a significant proportion of new teachers leave. But, as Macdonald points out, positive outcomes are also possible, including the redistribution of skilled workers to other segments of the job market; return to the profession of teachers who temporarily leave, bringing with them useful new skills and experiences; and elimination of resistance to change when those who leave do so because they object to policy changes or school improvement directions. While each of these possible positive and negative outcomes of attrition is observed, we have no reliable data about the incidence of each.

CONDITIONS. Considerable evidence suggests that the decision by teachers to leave their schools or the profession is mediated especially by job satisfaction and organizational commitment.[60] So, most of the working conditions associated with these internal states also contribute to teacher retention or attrition.

Nonetheless, there is a significant amount of research focused directly on teacher attrition and retention. In this section we examine the working conditions emerging from a sample of this research. In the United States, many such studies depend on data collected by the National Center for

Educational Statistics through its periodically administered *Schools and Staffing Surveys* and *Teacher Follow-Up Surveys*.

Excellent examples of studies making productive use of these data are those reported by Ingersoll. His studies are based on evidence from a large sample — 6,733 — of U.S. teachers' recent responses to both of the National Center's surveys. At the time of the study, this was "the largest and most comprehensive data source available on the staffing, occupational, and organizational aspects of schools" and was considered nationally representative.[61] Results of this study indicate that teacher turnover is predicted by three categories of variables:

Teacher characteristics: Turnover is more likely among both older (over 50) and younger (under 30) teachers, as well as among minority and female teachers.

School size and sector: Teachers are more likely to leave smaller rather than larger, private rather than public, urban rather than suburban or rural, and elementary rather than secondary schools. Within public schools alone, "Teachers in suburban schools are slightly more likely to turn over than those in urban public schools, once other factors are controlled. School size and district size are both inversely related to turnover in public schools."[62]

Organizational conditions: After controlling for the characteristics of teachers and schools, teacher retention is associated with higher salaries, support from administrators, a positive disciplinary climate, and opportunities for teachers to participate in school decision making.

The organizational conditions identified by Ingersoll that are of most interest for this report have been confirmed and extended in a substantial number of other studies of teacher retention and attrition. For example, in their 2005 study of turnover among California teachers, S. Loeb, L. Darling-Hammond, and J. Luczak found that high levels of staff turnover are a function of low salaries, large class sizes, problems with facilities, multitrack schools, and lack of textbooks. When

these conditions are taken into account, "the influence of student characteristics on turnover is substantially reduced."[63]

Other studies included in our review identify the following working conditions associated with teachers actually leaving their school or district or quitting the profession:

- low salaries, especially relative to other nearby districts
- employment opportunities outside teaching
- leadership style of principal/lack of support from school administrators
- lack of autonomy
- lack of influence on school decisions
- inadequate facilities
- student characteristics, for example, race, ethnicity, apathy, indiscipline, and low achievement
- lack of access to professional development
- low status of the profession in the community
- poor relationships with parents and the community
- negative images of teaching in the popular media
- class load including average class size
- teaching outside one's area of certification
- burden of non-teaching duties
- government policies (erratic and unresponsive) creating confusion and uncertainty
- accountability and increase in use of high-stakes tests[64]

Pedagogical Content Knowledge

EVIDENCE. Our discussion of teacher knowledge is constrained to one form of such knowledge and is largely informed by five recent reviews of research supplemented with one particularly relevant original empirical study.

CONCEPT. The extent to which variations in knowledge influence the quality of teachers' instruction and the learning of students has been the subject of considerable controversy for many years but has heated

up over the past 15 years of sustained school reform efforts. On one side of this controversy are those who view teaching as a relatively simple task, one that can be effectively undertaken by most people with an adequate grasp of the subject matter to be taught. Those holding this view advocate for the deregulation of the profession and a radical reduction in certification requirements for entry to teaching.

The other side of this controversy is populated by those who view teaching as a complex act requiring a level of arcane knowledge comparable to what is required in any of the established professions.[65] Advocates of this view believe that significant improvements in student learning depend on extended programs of initial and ongoing teacher preparation. They support the development of challenging teaching standards.

One of the key challenges in resolving the ongoing debate about the role of teacher knowledge in explanations of effective teaching is the nature of the relevant evidence that is available. The vast majority of research inquiring about the effects of teacher knowledge on instructional effectiveness and student learning measures the effects of only two (incomplete) types of knowledge. One strand of this research measures teacher knowledge about instructional strategies, typically using a proxy measure: the possession of a teaching certificate.

A second strand measures teachers' knowledge of subject matter content, also often using proxy measures such as the number of university courses taken in one's teaching subject.[66]

Neither of these two types of knowledge, standing alone, adequately captures the roots of effective instruction. These roots are to be found in a complex combination of the two, supplemented by a deep knowledge of students, contexts, and instructional purposes. L. S. Shulman labels this complex type of knowledge "pedagogical content knowledge."[67] Unfortunately, empirical research about the effects of such knowledge on teachers' instruction and student learning, and the conditions that help develop such knowledge, is extremely limited.

EFFECTS. What we do know about the effects of teachers' pedagogical content knowledge and the conditions giving rise to it is illustrated exceptionally well in a recent conceptually and methodologically impressive study by H. C. Hill, B. Rowan, and D. Ball. This is a longitudinal study of the effects of teachers' mathematical knowledge on the achievement levels of grade 1 and grade 3 students. The study was carried out with almost 3,000 students and 700 teachers in 115 elementary schools located in 42 districts across 15 states. About three-quarters of the schools were implementing one of three *Comprehensive School Reform* models.

Unlike many other studies of teachers' content knowledge, this study measured the knowledge of mathematics that teachers actually used as part of their instruction — not some proxy for such knowledge like college credits in math. So the teachers' knowledge measured in this study clearly counts as pedagogical content knowledge. Suffice to say that a great deal of effort went into constructing the measure of such knowledge.

Results of this study indicate that:

- teachers' pedagogical content knowledge for mathematics is a significant predictor of gains in student achievement in both grades 1 and 3
- the effects of such knowledge on student achievement are greater than such teacher background variables as certification and years of experience
- the effects of pedagogical content knowledge on student learning are just as large as the effects of students' socio-economic status (which usually outweighs everything else in such research), ethnicity, and gender
- the effect of having more of this type of knowledge increases as the complexity of the math curriculum increases, from grade 1 to 3

CONDITIONS. Hill, Rowan, and Ball's study is an important source of insight about the nature of one key working condition — professional

development opportunities — aimed at improving instruction. Results of the study indicate that effective professional development is not just about instructional methods, or just about content knowledge. The most powerful forms of professional development are subject-specific and focus on the knowledge required to help students understand key ideas in the subject.

Working Conditions Affect Teaching

It is clear from the evidence that teachers' working conditions play an important part in the quality of education that comes out of our schools. The research explains the links between working conditions and teachers' internal states — in particular individual teacher efficacy, collective teacher efficacy, teacher job satisfaction, organizational commitment, stress/burnout, morale, engagement or disengagement from the school or profession, and pedagogical content knowledge. It is now time to focus attention on the working conditions themselves.

The first two questions that have motivated this research are close to being answered: ***How do teachers' working conditions influence the performance of teachers and the learning of students?*** and ***Which working conditions have positive or negative effects on teachers' performance and student learning?*** This information needs to be put together with the empirical studies and filtered through the last question: ***What are some of the main causes or sources of teachers' working conditions?***

The evidence is strong and trustworthy: working conditions matter. What evidence is there about these working conditions, where do they come from, what is their effect and what can we do about them?

3

WORKING CONDITIONS THAT MATTER

Working conditions matter. Whatever reforms are proposed, ultimately their effectiveness depends, for the most part, on the teachers who implement them. What teachers do is intricately tied up with their thoughts and feelings — their internal states. And, teachers' thoughts and feelings are intricately tied to the conditions under which they work.

What are these working conditions that matter? What aspects of the complex system that makes up the working environment of teachers affect the internal states that have been shown to have an impact on teachers' ability to do their job? Which working conditions have the potential to influence the learning experience of students? And, back to one of the guiding questions, ***What are some of the main causes or sources of teachers' working conditions?***

Most obviously, working conditions within the **classroom** matter, particularly those that influence workload volume and workload complexity. **School-wide** working conditions — the culture of the school, the structure, the school's relations with the community, and the school's operating procedures — matter. Conditions that are created by the **leadership of the principal** matter. How does the principal set direction for the school? Is the principal considerate, consultative, and

supportive in developing people, instituting change, managing the instructional program, and in day-to-day interactions?

Further afield, but also shown to matter, are working conditions that are influenced by the **district, the province and by society** as a whole. Does the district offer well-designed professional development? Is the province reasonable and consultative in its policies of implementing curriculum change? How does society as a whole view teachers and the job that they do?

To gain a detailed understanding of teacher working conditions and their effects, this report examines evidence provided by two quite different types of research. The first is theory-oriented research framed by psychological and socio-psychological explanations of human behaviour much of which is guided by theories of workplace performance or theoretical conceptions of human feelings and knowledge, or what has been termed internal states.

In some of this research, the focus on teachers and their work is incidental to a more general interest in human functioning in the workplace. Teachers are considered to be representative of the larger population of workers. The best-designed examples of this type of research use separate measures for the variables. There are separate measures for the working conditions (the independent variable), for teachers' thoughts and feelings (the mediating variable), and for teachers' performances and student learning (the dependent variable).

There is a second type of evidence about teacher working conditions which is less theoretical and substantially more pragmatic, at least in its origins if not in its outcomes. This action-oriented inquiry is generated primarily by, or for, teacher federations and unions as a means of better understanding the worklife of their members and deciding what should be the focus of their advocacy for members.

Evidence of this sort is exclusively about teachers-qua-teachers and the specific features of their work environments that are the sources of their satisfactions, commitments, stresses, and the like. Typically, teachers are asked directly about their working conditions

and how such conditions affect their lives. Action-oriented evidence relevant for this review is collected from Canadian teachers in Ontario, Newfoundland and Labrador, British Columbia, Saskatchewan, Nova Scotia, and Prince Edward Island.[1]

This discussion is also informed by the results of two closely related action-oriented studies of teacher working conditions in both North and South Carolina conducted by the Southeast Center for Teaching Quality (SECTQ).[2] The methodological rigour of these studies, impressive size of the sample, and remarkable response rate, along with the consistency of results and especially their examination of relationships among teacher working conditions, student achievement, and student retention make them exceptionally useful.

Which Working Conditions Matter?

Table 4 lists the total set of working conditions identified in both the theory-oriented studies and the action-oriented studies. The table also identifies those internal states of teachers with which each working condition has been associated. The internal states are represented by numbers 1 through 8. In a few cases, the effects on teacher performance cited in studies that did not identify the mediating internal teacher states are identified with an asterisk (*).

TABLE 4

Summary of Teacher Working Conditions That Matter

Working Conditions	Teachers' Internal States
▶ CLASSROOM	
Workload Volume	
Perceived as fair	4, 5, 6
Total pupil load	5, 7
Class size	7
Amount of paper work	5
Burden of non-teaching duties	7
Total work time and its distribution	5, *
Workload Complexity	
Teaching in area of specialization or certification	7
Student achievement levels	7
Motivation of students/misbehaviour (-)	3, 5, 6. 7
Autonomy/lack of autonomy over classroom decisions	4, 5, 6, 7
Atmosphere conducive to learning	3
Availability of instructional resources such as textbooks	7, *
Composition of class (student diversity/split or multi-grades)	1, 5
▶ SCHOOL	
Culture	
Clear, explicit, shared goals for judging performance	2, 4
Perceived meaningfulness of the work	4
Perception of role conflict (or role clarity)	4
Sense of community/collaborative culture (or the reverse — isolation)	1, 3, 4, 5
Safe school environment	3, 6
High expectations for students	1
Academic press/climate of achievement	1, 3
Positive school atmosphere, friendliness of staff, disciplinary climate	1, 2, 3, 7

*teacher performance (-) negative influence

Key to Teachers' Internal States

1. individual teacher efficacy
2. collective teacher efficacy
3. job satisfaction
4. organizational commitment
5. stress/burnout
6. morale
7. engagement in the school or profession (retention/turnover)
8. pedagogical content knowledge

TABLE 4 / *cont.*

Summary of Teacher Working Conditions That Matter

Working Conditions	Teachers' Internal States
Structures	
School size (small better than large)	7
School location (urban less desirable)	7
Time to allow for both preparation and collaboration	1, 3
Opportunity to work in teams (especially relatively small teams)	3, 4
Opportunities for ongoing professional learning	4, 6,
Participation in decision making	1, 2, 3, 5, 7
Lack of barriers to effective instruction	1
Quality of physical facilities	7
Institutional integrity (effective, stable programs)	4
Community Relations	
Local reputation of the school	3
Community support/relationships with parents	3, 7
School Operating Procedures	
Quality of communication within school	3,
Fit of school improvement plans with teachers' view of school needs	1, 2
Regular performance feedback to school working groups	2,4
▶ **PRINCIPAL'S LEADERSHIP**	
Leadership practices as a whole	***7***
Direction Setting	
Developing an inspiring and shared sense of direction	1, 4
Expressing unreasonable expectations (-)	5
Developing People	
Being considerate	4
Being supportive	1, 3, 4, 5, 6, 7
Listening to teachers/is open to teachers' suggestions/collegial	2, 4

*teacher performance (-) negative influence

Key to Teachers' Internal States

1. individual teacher efficacy
2. collective teacher efficacy
3. job satisfaction
4. organizational commitment
5. stress/burnout
6. morale
7. engagement in the school or profession (retention/turnover)
8. pedagogical content knowledge

TABLE 4 / *cont.*

Summary of Teacher Working Conditions That Matter

Working Conditions	Teachers' Internal States
Looking out for teachers' welfare	4
Buffering teachers from disruption	1, 4
Rewarding teachers for good work	1, 3, 4, 6
Providing feedback on individual/group work	2, 4
Providing teachers with discretion over classroom decisions	1, 4
Distributing leadership/involving teachers in decision making	2, 4
Modelling appropriate values and practices	1
Redesigning the Organization	
Enforcing rules flexibly	4, 5
Managing the Instructional Program	
Providing instructional guidance	2, 6
Seeking creative ways to improve instruction	
Providing resources for teachers	1, 5, 6
Minimizing student disorder	1, 3, 6
Other Practices	
Acting in friendly manner	4
Communicating effectively	4, 6
Influencing district decisions	1, 2, 4
Inconsistent in behaviour (-)	5
Failure to follow through on decisions (-)	5
▶ **DISTRICT**	
Professional Development as in well-designed in-service:	
– differentiated for individual teachers	1
– distributed throughout period of change implementation	1
– nurturing of in-school professional networks	1
– useful as a support for instruction	1

*teacher performance (-) negative influence

Key to Teachers' Internal States

1. individual teacher efficacy
2. collective teacher efficacy
3. job satisfaction
4. organizational commitment
5. stress/burnout
6. morale
7. engagement in the school or profession (retention/turnover)
8. pedagogical content knowledge

TABLE 4 / *cont.*

Summary of Teacher Working Conditions That Matter

Working Conditions	Teachers' Internal States
Teacher salaries	3, 4, 7
Struggle over priorities	4
Pressure for change	5
District size (smaller is better)	7
▶ PROVINCE	
Pace of educational change and its management	3
Extra demands on time (e.g., implementation of new curricula)	4
Erratic, unresponsive policies creating confusion and uncertainty	7
Greater public accountability including the use of high-stakes tests	7
▶ BROADER SOCIETY	
Society/community's view of teachers and their status	3, 7
Negative images of teaching in the popular media	7
Other employment opportunities	7

*teacher performance (-) negative influence

Key to Teachers' Internal States

1. individual teacher efficacy
2. collective teacher efficacy
3. job satisfaction
4. organizational commitment
5. stress/burnout
6. morale
7. engagement in the school or profession (retention/turnover)
8. pedagogical content knowledge

Classroom Working Conditions

At the classroom level, evidence summarized in Table 4, indicates that both the volume and complexity of teachers' workloads have important consequences.

WORKLOAD VOLUME. Evidence indicates that teachers' overall attitude about the volume of their work depends on their perceptions of specific features of their environments. Feelings of stress are heightened and teachers' morale and commitment to their school are eroded when:

- teachers perceive their workload to be unfair in comparison with the work of other teachers in their own school or across the district

- the overall number of pupils for which they are responsible becomes excessive
- the size of their classes is perceived to make unreasonable demands on the time required for preparation and marking and seriously erodes the opportunities for providing differentiated instruction for their students
- excessive paperwork (filling in forms, collecting information for others, etc.)
- the burden of such non-teaching demands as hall monitoring, bus duty, and lunchroom supervision

TOTAL WORK TIME AND ITS DISTRIBUTION. Action-oriented research contributes most to our knowledge of teachers' workload volume by documenting the amount of time teachers actually work during the school year, as well as how that time is distributed. Understandably, this is a very significant issue for teachers, who are expected to carry out a seemingly endless number of functions.

For example, the North and South Carolina studies report that teachers consider time either the first or second most critical working condition for promoting student learning (although analysis of its relationship with student achievement did not support that view). Similarly, lack of time was the major workload issue for more than half of teachers included in a study conducted in Newfoundland and Labrador. And 80% of Nova Scotia teachers report feeling either often or always rushed each day.[3]

Weekly work times for Canadian teachers are quite similar from province to province. Evidence indicates that full-time teachers work 53 hours in British Columbia (these are secondary English teachers), from 50.5 to 54.3 hours in Alberta, depending on whether report cards were being prepared, 47 hours in Saskatchewan and 53 hours (for elementary teachers) in Ontario. Teachers in Nova Scotia work 52.5 hours during the school year as compared with 51 hours for New Brunswick teachers, 48 to 52 hours for teachers in Prince Edward Island, and 52.2 hours for teachers in Newfoundland and Labrador.[4]

Survey data from J. Matsui's study of Ontario elementary teachers reflect quite closely the results of other recent Canadian studies about how teachers distribute their time. Ontario teachers report a full-time teacher work week during the school year of 53.0 hours distributed as follows:

- 25.6 hours teaching classes
- 7.5 hours preparing to teach
- 3.0 hours working with students outside of class time
- 6.1 hours marking
- 3.1 hours supervising students including supervising extra-curricular activities
- 2.4 hours attending staff and team meetings and carrying out administrative duties
- 1.2 hours dealing with parent-related matters
- 1.8 hours preparing report cards (averaged over the school year)
- 0.4 hours working on IEPs and ISAs
- 1.9 hours on professional development

Full-time Ontario elementary teachers also report working 16.5 days during vacation days and holidays. And although part-time teachers in Ontario work many fewer hours than full-time teachers (35.5), their preparation time is in excess of 80% that of full-time teachers.

There are relatively small but significant differences among Ontario teacher groups, as is the case in other provinces, in the total amount and distribution of working time. The youngest group of full-time Ontario teachers (under 35 years of age) works about 2.6 hours longer per week than older teachers. This extra time is distributed across most of the tasks outlined above, except report card preparation and work on IEPs and ISAs, on which the youngest teacher group spends less time. Teachers 55 years and older report a 48.2 hour work week, the lowest of all age groups.

Fully half of Ontario elementary teachers report feeling overworked all or most of the time because of the constraints on their time. They believe that these constraints make it difficult for them to meet their own personal work standards, acquire new skills, find the time to work with individual students and consult with colleagues about

curriculum-related matters. Time demands are also reported to have a negative impact on their personal and family lives. This is especially the case for women, older teachers and, not surprisingly, those working in excess of 60 hours per week

Large proportions of teachers across Canada report increases in their volume of work over the past half-dozen years and very high proportions of teachers (for example, 90% in B.C.) identify increases in the size of their workloads, or lack of time to do their work, to be a significant source of stress.

Teachers believe that demands on their time have been increasing over the past half-dozen years largely because of the need to:

- implement new curricula
- learn and use new technology
- cope with increases in student discipline
- take on greater numbers of administrative tasks
- include more special needs students in regular classes

WORKLOAD COMPLEXITY. The complexity of their work — or work intensification — as teachers' perceive it, influences the same internal states as does workload volume.[5] Job satisfaction also is eroded by teachers' perceptions of an excessively complex teaching assignment. Such perceptions of excessive complexity arise when teachers are required to teach in areas for which they are not certified or otherwise ill prepared and when their students are uncooperative and achieve relatively poorly.

Complexity is perceived to be increasingly manageable, however, when teachers are given a significant degree of autonomy over classroom decisions, allowing them to do the job the best way they know how. K. Leithwood, P. McAdie, N. Bascia, and A. Rodrigue's Ontario study indicates that elementary teachers in the province substantially agree that they have enough discretion in their classrooms to teach the way they believe they should. Manageability increases also when a school has an atmosphere that encourages learning and when instructional resources are readily available.

Federation-sponsored research reinforces many of these findings and adds another dimension. This action-oriented research indicates that, from the point of view of teachers, the complexity or general difficulty of their work is significantly increased by:

- insufficient preparation time
- excessively large classes
- class composition (for example, more ESL and special needs students)
- unmet needs of students arising, for example, from cutbacks in specialist and the presence of non-designated students with special needs
- disruptive students
- effects on students' aspirations, behaviour, and readiness for learning of dysfunctional family environments
- split or multi-grade classes, especially for elementary teachers
- inadequate levels of learning resources
- inappropriate assignments[6]

Teachers' work is also made more complex by the decidedly uneven pattern of demands on their time. At one extreme, holiday periods afford the relative luxury of time for planning and preparing for instruction without many other work demands to be juggled at the same time. At the other extreme, as D. Dibbon reports, many teachers spend from 24 to 28 extra hours preparing for and reporting to parents during each two-to-three-week reporting period every term, on top of their other regular duties.

In between these two extremes are teachers' normal approximately 50-hour weeks, about half of which (the only half many members of the public seem to count) are spent in intense interpersonal interaction with a classroom of highly diverse children. Of all the things that teachers do, this core function of teaching is among the highest sources of stress for teachers, in large part because of the sheer number of specific tasks entailed in performing the function well.[7]

It is difficult to imagine a less routine, more complex form of work.

That this complexity has garnered such little notice and respect by the wider public may well be due to the fact that historically it was managed so well by the community's smartest women for whom teaching was one of the few professional occupations to which they had ready access.

School-Level Working Conditions

Table 4 identifies four sets of school-level working conditions with a significant influence on teachers' internal states — school **culture**, **structure**, **relations with the community** and **operating procedures**.

SCHOOL CULTURE. School culture has significant effects on seven of the eight internal states of teachers — all but pedagogical content knowledge — with which we have been concerned. Increasingly positive contributions are made to the affective lives of teachers by school cultures in which:

- the goals for teachers' work are clear, explicit, and shared
- teachers are able to find their work meaningful — for example there are clear and morally inspiring goals
- there is little conflict in teachers' minds about what they are expected to do
- collaboration among teachers is encouraged
- their safety and the safety of their students is valued and supported
- there are high expectations for students
- a strong academic press is evident to students and teachers across the school
- there is a collegial atmosphere (a sample of Ontario teachers recently expressed at least moderate agreement that their "school seems like a close and cordial family" and that they are "supported by colleagues to try out new ideas."[8])

How the school manages student behaviour is also an important factor. School-wide management of student behaviour can have significant

effects on the time required of individual teachers for this task and the time available to them for instruction. There is, therefore, an arguable relationship between this working condition and both teacher and student performance.

We know, for example, that time devoted to instruction is one of the most powerful explanations for variation in student achievement. And there is evidence that too much time spent dealing with student misbehaviour has significant effects on teacher satisfaction, stress, absenteeism, and attrition. These negative effects are substantially ameliorated when administrators and teachers together set and consistently enforce rules for student behaviour throughout the school.

Teachers also thrive when the cultures of their schools value and support their safety and the safety of their students and when there are high expectations for students and a strong academic "press" evident to students and teachers across the school.

Recent analyses of the 2003 PISA data, collected by OECD in a large number of developed nations, indicate that the **schools' disciplinary climate is one of the four strongest predictors of student learning**.

This climate was also shown by Ingersoll to be a strong predictor of teacher retention.

SCHOOL STRUCTURES. The primary purpose for school structures is to make possible the development and maintenance of cultures that support the work of teachers and the learning of students. Not all structures are alterable, at least not easily, or in the short term. In particular, this is the case for school size and location.

While this review finds that the internal states and work of teachers are most likely to be enhanced in relatively small schools located in suburban rather than urban locations, there is not much that can be done about school size or location, although the school within a school is currently a popular response to large school structures. (The Gates Foundation in the United States is spending enormous resources in an effort to reduce the number of very large high schools.)

All other structural attributes of schools associated with teachers' internal states are potentially quite malleable, however, and can easily outweigh the negative effects of larger school sizes and urban locations. Positive contributions to teachers' internal states — efficacy, satisfaction, commitment, reduced stress, morale, engagement — are associated with structures that provide teachers opportunities to collaborate with one another such as common planning times. Leithwood, McAdie, and their colleagues find that this is likely an issue for Ontario teachers, a sample of whom report insufficient time during the school day to meet with colleagues about curriculum issues. C. Naylor and A. Schaefer find that working in small teams is a positive experience for a third of the B.C. teachers in their study, but a source of stress for almost a half.

Positive effects on teachers' internal states are also associated with time to prepare adequately for classroom instruction. Matsui finds this to be a common recommendation for improving their working conditions by Ontario teachers, and Naylor and Schaefer find 85% of B.C. teachers to be stressed by insufficient time for preparation.

Teachers associate positive feelings about their work with access to good-quality professional development. In the two Carolina studies, for example, teacher access to high-quality professional development is a significant predictor of both teacher retention and student achievement. For teachers in this study, "content-driven professional development" is believed to be of most value to them, not professional development focused on "generic teaching behaviors."[9]

Teacher learning opportunities may be found in many sources in addition to the school. But the school is a potentially rich source of professional learning, depending on its structure and culture.

- The school's goals are a legitimate source of direction for professional learning.
- The school's students provide the unique challenges to which any new learning must respond.
- The school's resources set boundary conditions on the expression of any new learning.

Furthermore, as S. Rosenholtz and C. Simpson explain:

> School settings that facilitate learning opportunities may increase teacher commitment by expanding the meaningfulness and professional stature of the work, by avoiding the burnout of tedious routine, and by enhancing teachers' ability to perform core tasks well.[10]

There is a current popularity among district and school staffs of the idea of becoming professional learning communities.[11] This is an indication of just how critical the profession itself believes ongoing learning opportunities within their organizational settings are to the continuing improvement of instructional performance, commitment, and satisfaction. Forms of professional development contributing most to sustained teacher learning include study groups, coaching and mentoring arrangements, networks linking teachers together to explore problems of mutual concern, and immersion in inquiry activities with students.[12]

The Leithwood, McAdie, et al. 2004 Ontario study found elementary teachers disagreeing that they had sufficient professional development opportunities but agreeing, at least weakly, that they had "many opportunities to learn in my present job" and that "my job provides me with continuous stimulation and professional growth."

Empowerment, participation in school-level decisions, and other ways of exercising control over their work constitute another critical working condition for teachers. Naylor and Schaefer find that almost 80% of their sample of British Columbia elementary teachers report lack of control over their work environment to be a source of stress and that a third report satisfaction from involvement in decision making. Comparable findings have also been reported by teachers in Prince Edward Island. Both Hirsch studies find that teacher empowerment is a significant predictor of both teacher retention and student achievement.[13]

Physical facilities that permit teachers to use the types of instruction they judge to be most effective increase teachers' engagement in their schools and their desire to remain in the profession. Positive perceptions

of the school's facilities and resources were a significant predictor of student achievement in the Hirsch North and South Carolina studies. Teacher engagement and retention increase also when the school has well-developed and stable programs — the meaning of "integrity" — on which to build when new challenges present themselves.

COMMUNITY RELATIONS. A third set of school-level conditions, community relations, influences teachers' job satisfaction, as well as the probability of remaining in the school and profession. Positive contributions to these states occur when the reputation of the school in the local community is positive and when there is considerable support by parents and the wider community for the efforts and directions of the school. Naylor and Schaefer discover that 40% of their respondents believe relationships with parents are a positive feature of their work lives.

SCHOOL OPERATING PROCEDURES. Finally, at the school level, there are working conditions which, as a group, influence teachers' sense of individual and collective efficacy, as well as their job satisfaction and organizational commitment. These conditions are the quality of communication in the school and how well the school's plans for improvement match teachers' views of what the school's priorities should be. Theory-based evidence also points to the value of providing regular feedback to school working groups about the focus and quality of their progress.

Principal Leadership

The influence of what principals do on teachers' working conditions is examined separately from other school conditions because the source of such conditions is so clearly distinct and the effects so alterable.

Principal leadership also acts as a catalyst for many of the other school conditions identified in Table 4. For example, collaborative cultures and the structures that support them are very hard to develop and sustain in the absence of supportive leadership from school administrators. Conclusions from the North and South Carolina studies

provide considerable support for this view.[14] Conditions associated directly with the practices of those in formal leadership roles are critical to improving most other teacher working conditions examined in these studies. Leadership practices, as a whole, are the second most frequently cited set of conditions considered "most important" in teachers' decisions to stay or leave their school, and these practices had significant effects on student achievement.

Results of our review of theory-based research identified a substantial list of leadership practices associated, as a whole, with all eight of the teachers' internal states with which we are concerned. These practices have been organized in Table 4 around four sets of core practices found in a model developed from recent reviews of evidence about effective leadership.[15] The core practices are aimed at direction setting, developing people, redesigning the organization, and managing the instructional program.

DIRECTION SETTING. Table 4 identifies direction-setting practices of principals that significantly influence teachers' stress, individual sense of efficacy, and organizational commitment. One of these practices — helping the staff develop an inspiring and shared sense of purpose — enhances teachers' work, whereas holding (and expressing) unreasonable expectations has quite negative effects.

DEVELOPING PEOPLE. The largest number of principal practices influencing teachers' internal states are classified in Table 4 as "developing people." Included among these practices are being considerate and supportive, listening to teachers' ideas and being collegial, and generally looking out for teachers' welfare. Ingersoll's research suggests that administrative support is one of the key predictors of teacher retention.[16]

Buffering teachers from distractions to their instructional work, acknowledging and rewarding good work, and providing feedback to teachers about their work are also positive working conditions for teachers. Principals assist the work of teachers when they provide them with discretionary space, distribute leadership across the school, and

"practice what they preach" — in other words, they model appropriate values and practices.

REDESIGNING THE ORGANIZATION. In this category of leadership practices, evidence reviewed identifies only the flexible enforcement of rules by the principal as having consequences for teachers.

MANAGING THE INSTRUCTIONAL PROGRAM. As part of this category of leadership practices, our theory-based research review identifies providing instructional guidance either through some formal supervision procedure or, more importantly, in many informal, more frequent ways, including joint efforts with teachers to find creative ways to improve instruction. Providing resources for teachers and minimizing student disorder in the school are highly valued conditions of work which principals are also in a position to provide.

OTHER PRACTICES. As Table 4 indicates, four influential practices by principals emerged from the theory-based research that could not readily be classified among the other sets of core leadership practices. Positive effects on teachers' individual and collective efficacy, organizational commitment, and stress are reported for principals who act in a friendly manner, communicate effectively, and are able to influence the decisions of district administrators to the benefit of the school. Excessive stress for teachers resulted from inconsistent behaviour on the part of principals and frequent failure to follow through on decisions.

District Working Conditions

Our review of theory-based research evidence uncovers a small number of important working conditions over which districts have significant or primary control. These conditions, as Table 4 illustrates, influence teachers' individual efficacy, job satisfaction, organizational commitment, stress, and morale.

Perhaps the most influential district-level working condition for

teachers is access to meaningful professional development (also likely to influence teachers' pedagogical content knowledge, although this is not a focus of the studies reviewed). Considerable variation across districts seems likely for this working condition and there is reason to believe that considerable improvement is called for in many districts. For example, teachers in Dibbon's study indicate that access to in-service for new programs they are asked to teach is

> inappropriately timed, inadequate or non-existent. Two thirds of the teachers in this study had one day or less and 21% with a new course indicated that they had no in-service at all.[17]

Teacher salaries, typically under district control, have significant effects on teachers' internal states, in spite of the fact that teachers are among the most altruistic of occupational groups. Salaries have a particularly significant impact on teachers' feelings when they are noticeably lower in comparison with teacher salaries in other nearby districts.

Districts also are a frequent source of change — new courses, guidelines, standards, forms of student assessment, and the like — either independently or as an arm of the provincial government. Both the nature and the speed of such change can become a significant source of stress for teachers. This is the case when changes are determined with little teacher consultation and actually fly in the face of what teachers believe should be the priorities. Teachers also experience dysfunctional levels of stress when they believe the timetable for implementing district changes is unrealistically short.

Extra time of teachers is also required by these changes, time to make appropriate adaptations and to actually implement them well in the classroom. Dibbon finds, for example, that almost one third of teachers in Newfoundland and Labrador identify "new programs and curricula" as a major workload issue. Forty-seven percent of teachers in this study are teaching one new course, 25% two new courses, and 10% three new courses. Each new course, these teachers estimate, requires in excess of one extra hour of preparation each week.

Large district (as with class and school) structures are typically

less able to provide such helpful conditions of work for teachers as a district-wide sense of community and differentiated allocation of resources in support of unique classroom and school improvement efforts.

One federation-sponsored study carried out in British Columbia reports that nearly three-quarters of teachers perceive their school board's actions and attitudes as stressful. On the other hand, a recent sample of Ontario teachers at least weakly agree that "the Board is a source of considerable satisfaction with my teaching job."[18]

The Province and the Broader Society

EDUCATIONAL POLICY ENVIRONMENT. Like districts, provincial governments and their ministries of education are often sources of substantial change through the enactment of new policies and guidelines. Teachers' job satisfaction, organizational commitment, and continuing engagement in the school or profession are seriously eroded when the pace of externally initiated changes seems too rapid, and when such changes demand significant amounts of extra time from teachers, both to learn about and to implement.

Teachers' job satisfaction, commitment, and engagement also are challenged when externally imposed changes seem erratic or unresponsive to what teachers believe are the real needs of schools and students. Furthermore, it seems likely that many such changes will be viewed in this way.

A. Harvey and J. Spinney, for example, find that teachers in Nova Scotia perceive federal and provincial politicians to have the poorest understanding or appreciation of their work, yet considerable power over demands on their time. A high proportion of teachers in Ontario do not trust the motives for many of the policy changes introduced by the last Conservative government and, as a result, are very skeptical about the value of those changes. Government actions and attitudes, more generally, are found to be a source of stress for more than 80% of B.C. teachers.[19]

Accountability-oriented reform. Among the most popular government generated changes over the past decade are policies and practices aimed at holding schools more publicly accountable for student learning. While many of these policies seem well intentioned, the regulations and practices associated with them typically erode teacher autonomy. This has certainly been the case in Ontario.[20]

These policies also constrain the use of teacher expertise in many ways. Some examples of ways that expertise is constrained are by:

- prescribing large numbers of very specific curriculum standards
- introducing high-stakes tests that measure a relatively narrow set of student outcomes
- endorsing a small number of teaching strategies to be used by all teachers
- in the case of the U.K., by tightly scheduling the activities to be carried out in the classroom related to literacy and mathematics[21]

These policies are strongly associated with teachers' intentions and actual decisions to leave the profession. S. Lasky, S. Moore, and S. Sutherland report that the negative political tone associated with some of these reforms prompts this response among Ontario teachers.

Implementation of such reforms has been cited as a cause of reduced job satisfaction, teacher burnout, and job-related stress.[22] This seems a high price to pay for such policies, especially when there is very little evidence that the positive effects on schools and students, which such policies assume, actually have much empirical reality.

An important element of recent accountability-oriented reform efforts has been the development and use of teaching standards. In an extensive review of evidence in the United States, L. Darling-Hammond concludes that new teaching standards over the last decade have resulted in a need for teachers to teach "much more challenging content to a much more diverse group of learners." These capacities, she argues, can only be widely acquired throughout the teaching force

by greater investment in teacher preparation and development. "These standards change the nature of teaching work and knowledge, positing a more active, integrated, and intellectually challenging curriculum for all students, not just the most academically able."[23]

Teachers need to be more skilled in diagnostic teaching with multiple pathways to learning so that students who encounter difficulty get the help they need to succeed. Some current reforms also broaden the issues teachers encounter outside the classroom, including developing curricula, assessing student performance, coaching and mentoring colleagues, and working more closely with families and community groups.

Accountability-oriented policies also have the potential to support dysfunctional professional norms and values in the school. Norms and values in schools that encourage teachers to collaborate in the design of instruction and in planning for a coherent set of experiences for students have long been considered among the most important features of effective schools.[24] Collaboration is closely associated with a sense of collective efficacy and it is hard to imagine such efficacy in the absence of collaborative experiences for teachers.

Culture of competition. The absence of a collaborative culture has typically been understood as an isolated culture.[25] But recent increases in student testing and accountability have created another alternative under particular conditions, a culture of competition among teachers based on their student test scores.

Ontario teachers report increased competition among schools, a change they believe has a negative impact on their work.[26] A recent qualitative study of teaching in the context of the Texas accountability system finds that the practice of publicly reporting student test results (as in Ontario), and reporting within schools the scores of individual classes (unlike Ontario), "led teachers to see their colleagues as threats rather than partners…[and this] affected the faculty's ability to work together toward a common goal."[27]

This competitive environment, furthermore, is a huge source of stress for teachers even though student test scores are not part of the formal teacher evaluation system. And this stress leads to practices the

researcher describes as "educational triage" — essentially focusing instructional resources on students close to passing the state test while neglecting students deemed unlikely to do so in the short run.

Two studies undertaken with Ontario teachers further substantiate many of these reported effects of provincial policy on teacher working conditions, especially those introduced by the previous Conservative government.

D. Gérin-Lajoie, D. Wilson, and C. Lenouvel focus their study on the effects of seven such policies. In the approximate order of their perceived influence, these policies include

- curriculum reforms
- provincial testing
- professional development for recertification
- centralization of funding
- school councils
- school board amalgamation
- for francophone teachers, language planning

Curriculum reforms are typically considered to have the largest influence, and many teachers perceive this influence to be positive. However, the negative features of these reforms are the highly prescriptive nature of the curricula and lack of resources and training for implementation. Provincial testing is considered to be a highly influential initiative, one largely viewed as a negative influence because of worries about narrowing the taught curriculum and encouraging competition among schools.

Some of these results echo the findings of the other Ontario study, Lasky, Moore, and Sutherland, carried out in 1999, five years earlier when there had been much less actual experience living with these policies. At that time, teachers were generally opposed to provincial testing and the centralization of education funding, and they were not happy about the new curriculum.

This study also inquired about a series of government-initiated changes not touched on in the Gérin-Lajoie study. These initiatives

were changes in class size, reduction in professional development days (from 9 to 4), and increased hours of classroom teaching. Each of these changes seems inevitably to increase teacher workload.

WIDER SOCIAL FORCES. There are conditions beyond the official environment of public schooling that have an important bearing on teachers' job satisfaction and their continuing engagement in the profession. These conditions, difficult for education professionals to change, include community views of teaching and its status, how those views are portrayed in the media, and alternative employment opportunities. Negative views of teaching on the part of community members and unflattering media portrayals of the profession significantly erode teachers' job satisfaction and increase the chances of them leaving the profession.

Public opinion about schools has an influence on teacher morale. Teachers sometimes cite newspaper accounts of public attitudes toward teaching when they comment on how little support they get from parents,[28] although Naylor and Schaefer report that 70% of their respondents find public attitudes and actions to be only a low to moderate source of stress for them. This study also finds the media focus on education to be a stressful factor for at least two-thirds of teachers. Prince Edward Island teachers also perceive a lack of government and public support.[29]

While it is teachers' ***perception*** of negative attitudes on the part of the public and in the media that influences how teachers feel and act, their perception of growing public dissatisfaction is not just a matter of teacher over-sensitivity. Public opinion surveys done by OISE/UT, for example, do indicate that public satisfaction with education has been in slow decline over the past 30 years and only about half of those polled most recently are satisfied with the performance of schools.[30] It is important to note, however, that such dissatisfaction is not directed primarily at teachers. The "trust in occupations" data from a 1999 Gallup poll, for example, indicates that teachers are the third most trusted occupational group in Canada, topped only by nurses and doctors.

A wider social force affecting teachers is alternative employment opportunities. Such opportunities significantly increase the chances of teachers leaving the profession, although such opportunities are not equally available to all teachers. For example, teachers trained in math and science are substantially better situated to take advantage of employment opportunities in the information technology sector that expanded so rapidly during the 1990s.

Beyond the three social forces discussed above, teachers providing data for Gérin-Lajoie, Wilson, and Lenouvel's study report their working conditions to be influenced negatively by, in order of strength,

- changing youth cultures
- changing family structures
- growing levels of urban poverty
- greater student diversity
- multi-ethnicity

These social changes greatly increase the complexity of teachers' work, and significantly extend the responsibilities of teachers beyond the school and classroom. It would be hard to argue that this shift does not result in increased workload.

Teachers in the same study also point to increased violence in society as having a negative impact on their work. The most direct form this impact takes is evident in the results of a study on the bullying of teachers undertaken by three Ontario teacher federations.[31] Based on surveys and interviews with 1,217 teachers, this study suggests that substantial proportions of teachers, especially elementary and women teachers (approximately 40% in each case), have been bullied by parents or students.

Yes, Working Conditions Matter. Now What?

The evidence is strong that working conditions matter, and that they influence the performance of teachers and therefore the learning of students. We know which working conditions have positive effects on teachers' performance and which have negative effects. And there is

evidence that points to causes and sources of these working conditions that matter. This is the kind of information, backed by evidence, that can now be used to make a difference. There are things that all of us can do. The following chapter makes recommendations for all levels of the education system.

4

WHAT CAN BE DONE? RECOMMENDATIONS

"Can this report help you?" These recommendations are the help that is offered by this report. They are based on solid, reliable, responsible, and extensive research. Evidence used includes 26 reviews of research and 91 original empirical studies — evidence presented so that you have the support that you will need to promote these recommendations. And so that you can, with confidence, adapt these recommendations to your own situation and develop others of your own. Each recommendation represents a starting point.

We start by presenting the recommendations that apply directly to teachers. Teachers have some control over working conditions that matter. They are the closest to the students and have the best chance to effect immediate change. But beware, teachers are only one part of this community. Their efforts can be undermined if they do not have constant support. By placing them first, the importance of this set of recommendations is emphasized, but this ordering is not meant to imply that this is where our efforts should end. The recommendations that follow — those for policy makers, federations and unions, and administrators — are just as important.

Indeed, the recommendations end with those for school and district administrators — with a huge emphasis on principals. There seems to

be agreement across the board in the research that principals play a key role in creating working conditions that matter for teachers. What is controversial, however, is the form that this leadership role should take. As with all of our recommendations, the source of the evidence is examined as is the research that has led to the conclusions that are drawn. These are based then on the studies that have the highest standards.

Working conditions are a result of the interplay of the community as a whole, or, in other words, the result of numerous interdependent variables.

For Teachers

Here are five highly interdependent recommendations for teachers. They are not meant to be equally relevant for all teachers, but each should be relevant for a significant group of teachers.

Build your own network of professional colleagues.

Traditionally, the professional cultures of schools have been described as isolated. This means that adults in the school mostly work by themselves, with their own students, only infrequently coming together to share their professional concerns and craft knowledge. By now a substantial amount of evidence associates more collaborative cultures with better teaching practices and greater student learning.

A network of professional colleagues — inside or outside the school — can be a powerful source of ongoing, informal professional development, contributing to both your pedagogical content knowledge, as well as your sense of professional self-efficacy.

A network of professional colleagues, furthermore, is an important source of those social supports that are the key to reducing anxiety, stress, and the likelihood of becoming burned out. So stay connected *especially* when there seems to be too much marking to go the staff room or out to lunch with your colleagues.

Be proactive about your own professional development.

As evidence indicates, meaningful professional development is a working condition associated with teacher morale, organizational commitment, engagement in the school and profession, as well as pedagogical knowledge.

Districts and schools vary widely in their provision of meaningful professional development opportunities for teachers. Opportunities of this sort are too important to leave to such organizational vagaries and there is no need to do so.

Professional development is typically associated with formally structured events, often located outside the school and usually designed and run by someone outside the school. Considerable evidence now suggests that the most powerful forms of professional development are often informal, are designed by teachers themselves, and take place in teachers' own schools. This recommendation is for teachers who feel short-changed in this respect, and is intended to encourage them to look after their own professional development.

Building a network of colleagues has already been recommended as a strategy for professional development, among other things. But there are many additional ways in which you can take charge of your own professional development. For example:

- organize a study group one evening a month
- invite a talented colleague from another school to share her work with your team one day after school
- subscribe to one or two professional journals and carve out the same sacred time each week to read them
- gently steer staff room talk away from social "chitchat" toward examples of instructional practices that seem useful to your students

All this (and of course much more) is doable. In many cases, you already do as much for your students. (And remind yourself and anyone else that needs to be reminded, that your professional development is also for your students, as are all of these recommendations.) It will make an

enormous cumulative difference to your own instructional practice and how you feel about your work. And it will eliminate your dependence on someone else for your own professional growth.

Expect effective leadership from your administrators.

The positive influence of high teacher expectations on student learning was a robust research finding even before the effective schools movement of the 70s and early 80s awarded it so much attention. Everyone (not just students) is influenced by the expectations of others. Administrators are no exception. You should expect effective leadership from your administrators, especially from your principal. There is a lot of evidence that points to the leadership practices of principals as a key set of teacher working conditions. Indeed, what principals do serves as a catalyst for much of what happens in schools.

It is a great disservice to your students and your school if you do not expect and have effective principal leadership. It is that important. Expect and demand effective principal leadership.

What is the effective leadership you should expect?

Effective leadership is not autocratic, top down, coercive, inconsistent, unfriendly, uninterested in your instructional practices, absent from the school much of the time, excessively demanding, or obtuse about priorities.

Effective leadership is collaborative, supportive, consistent, friendly, informative, instructionally expert, there when you need help, skilled in finding the resources you require, anxious to learn your views, reasonable in its demands, concerned about your welfare, and clear and explicit about priorities.

In the leadership jargon of the day, effective principal leadership is both instructional and transformational.

Some teachers will be inclined to the view that the principal is the boss, not someone they should try to influence, even if they knew how. Think about it again.

Few principals, except for some rookies, think they know everything that needs knowing in order to administer a school. Experienced principals, those who are already good at what they do, understand that they need all the help they can get. So they are actually quite concerned about learning your views and getting your advice.

Be kind. Don't deprive them — share your views and advice. Let them know when they do something that works and let them know, diplomatically, when their decisions are questionable. Insist, gently but persistently, on being consulted. It is your school every bit as much as it is theirs. And you will likely be there much longer than the principal, so the stakes are higher for you than for her.

There is an unusually high proportion of rooky principals in our schools these days. These are often quite talented people, but it is their first experience in a very complex and demanding job (remember your first year as a teacher?), and their learning curve is very steep. They are not the enemy to be criticized for their naïveté or lack of experience.

Many are concerned about admitting they don't know what to do about many matters crossing their desks. But you should assume that they don't until it becomes clear that they do, and be as supportive and helpful as you can. You have an important role to play in that person's development as an effective leader. It is in both your interests, as well as the interests of your students, that your views are heard.

Insist on having a voice in decision making.

Having a formal role in decision making is crucial for teachers. Considerable evidence associates such participation with positive impacts on the internal states of teachers.

Providing for such participation is also a key leadership practice of effective school leaders. Such participation affords teachers the opportunity to shape their work and the work of their colleagues as

their professional know-how and experience would recommend. It reduces the likelihood that administrators will make ill-informed decisions on their own. It also ensures that leadership is distributed throughout the school.

Don't think that insisting on a voice in decisions is just for you. It is also a mechanism that enables the school to make use of the collective wisdom of its staff.

Put realistic boundaries around your volunteer work.

Teachers work long hours during the school year, on average 53 hours a week. These hours are spent doing three jobs.

Job One is everyday classroom instruction and the preparation and marking required for such instruction. This is an extremely demanding job in its own right, managing to keep several dozen very diverse students more or less happily learning approximately the same thing in roughly the same amount of time to the satisfaction of at least their parents and the principal.

The second job entails being a member of the school organization. The number of tasks associated with this job is potentially huge. For example:

- managing extracurricular activities for students
- tutoring students before and after school
- providing informal family counselling
- leading events at the school
- participating in district-wide curricular committees
- representing teacher colleagues on the school council

These activities are just the tip of the iceberg.

Being a member of the teaching profession is the third job. This might entail as little as voting on federation issues brought to your attention or as much as serving as an executive member of the local or provincial body.

Teachers have the least choice about the time they spend on the first job and the most choice about the time they spend on the third

job. The point is they do have choices that can significantly increase or decrease their overall workload and the total amount of time it requires of them.

As an employee group, teachers are widely known to be unusually committed to their work, often taking on much more than is reasonable because it seems like the right thing to do. However, when taking on more than is reasonable produces high levels of stress, reduces job satisfaction, or raises the spectre of leaving the profession, it is in no one's best interest, not the teacher's, the school's, or the students'. When workload demands begin to be overwhelming, learn how to say no.

For Policy Makers

Be highly strategic about the demands for change that you place on teachers.

Demands on teachers are often quantified by calculating the amount of time required for them to do their work. While such calculations begin to help us understand how teachers feel about their work, stress and burnout are the result of individual teachers interpreting the demands they face and the time required of them as difficult or impossible to cope with.

Nevertheless, during the school year, it is clear that most teachers juggle many different tasks in an interpersonally hot environment that is only partly predictable and requires a relatively long work week. This seems inevitably to be the nature of teaching, at least as the job is designed in North American school systems.

There are two relatively obvious strategies for reducing job demands to something more manageable for more teachers. One is to restructure the job more along the lines found in some Asian and European school systems, allocating a smaller proportion of time to actual classroom instruction. This change requires substantially more than marginal increases in the overall education budget and, for that reason, it seems pointless to advocate for such a shift.

The second strategy, the one advocated here, entails being much more strategic about the demands for change placed on teachers by the policy environment.

A significant source of teachers' feelings of being overloaded includes the rapid introduction of new curricula, testing practices, organizational structures, relationships with parents, and the like — especially when it is difficult for teachers to understand how these changes cohere and what value they will add for students.

There is wide agreement that *change overload* accurately describes a high proportion of education systems in the world today, including Ontario's (although the current government needs to be congratulated for ensuring that whatever changes it introduces are based on solid evidence of their value to students).

In spite of widespread agreement about teachers being overloaded with externally imposed changes, the common response of policy makers is to assume that such overload has now become inevitable (the post-modern condition, the natural state of a global economy, the new reality, etc.), and to intimate to those in schools and classrooms that they will just have to "suck it up."

This position leads to widespread dysfunction for three reasons.

1. Change overload is *not* inevitable. It is the product of human decision making, often driven by either an unfortunate misinterpretation of the need for coherence among the different elements of the school system as a call to do everything at once, or simply by the need for politicians to demonstrate sufficient initiative to get re-elected.
2. There is typically an inverse relationship between the number of different changes mandated for, or adopted by, a school and their actual benefits for students. Schools are widely noted for constantly appearing to respond to external pressures for change in an effort to retain legitimacy with the public. But they are also widely criticized for failing to have improved their contribution to student learning over

the past half-century. Increasing the number of changes to be implemented by teachers is the problem not the solution. Student learning is much more likely to improve through the in-depth implementation of a very small number of strategic, well-thought-out changes.

3. Assuming the inevitability of change overload is dysfunctional because people do not "suck it up" just because they are expected or told to do so. When teachers feel overloaded with change, they experience considerable stress, with 20% reaching the level of burnout, on average. This is a staggering proportion of the teaching force coping with such difficulty, and knowingly creating burnout for this many teachers is just plain inhumane. That it is allowed to continue without much overt consideration may even reflect subtle but continuing gender inequities in a profession historically governed largely by men but populated largely by women. We know that teachers work in excess of 50 hours a week. But we also know that women continue to be the primary caregivers and child rearers in their families. Small wonder that so many teachers feel overloaded.

From a more instrumental perspective, considerable evidence also indicates that being in the classroom of a teacher experiencing burnout will not, to say the least, stimulate those elementary students performing at levels 1 and 2 on EQAO tests to increase their performance to levels 3 or 4. Quite the opposite. It could be argued that teacher burnout seriously threatens the achievement of roughly 20% of the students in the province.

This line of argument recommends special attention to the working conditions that influence teacher stress and burnout. Change overload is one of those conditions and much of it is under the direct control of the province's policy makers. The message to those policy makers is: **Do less. Both students and teachers will be the better for it**.

For Teacher Federations and Unions

Continue to insist that changes to the school system that have significant consequences for teachers' work be justified by robust research evidence.

Results indicate that the continuing demands for teachers to change their practices contribute significantly to teachers' sense of being overworked. That teachers feel this way should not be surprising in light of the complex array of tasks teachers manage routinely and the long hours most of them work during the school year in order to do so.

Typically, the policy makers and other authors of these ever-escalating demands have been infamous for neither justifying the efficacy of what they demand with credible evidence nor taking seriously the opportunity costs associated with implementing their demands. When was the last time you encountered a new policy or practice being advocated in conjunction with an explicit specification of what its implementers would no longer need to do in order to find the time?

This recommendation, nonetheless, assumes that ongoing changes are an expected and warranted part of teachers' work, as they are of the work of most other professionals. Furthermore, teacher unions are viewed by some stakeholders as almost always resisting change, no matter its nature.

This recommendation urges ETFO to retain its generally positive and open orientation to the introduction of changes to schools and classrooms but to insist that such changes demonstrably improve the educational experiences of students without negatively affecting teacher working conditions. As important, ETFO should raise the bar considerably on what such demonstration entails, holding change initiators at the district and provincial levels accountable for demonstrating the value of their initiatives with robust research evidence.

Endorse collaboration and partnership as ideal characteristics of ETFO–government relationships, whenever possible.

While ETFO has long nourished collaborative and partnership-like relationships with the provincial government when these have been possible, this review of teacher working conditions and their effects provides additional justification for persisting in this direction.

When union-government relationships break down, many teachers experience considerable ambiguity about the direction of their improvement efforts and considerable erosion of their trust in the motives of policy makers and administrators. Such ambiguity and mistrust reduces teachers' organizational commitment and morale, increases teachers' levels of stress, potentially challenges their sense of efficacy, and raises questions about continuing in the profession, especially when the public interprets such troubled relationships as intransigency on the part of teachers.

Teachers' internal states and their classroom performance contribute much more positively to student learning when there is a consistent, largely uncontested sense of direction for change in the province. This recommendation, it should be noted, is as relevant for the government as it is for ETFO.

Establish, as key priorities for future, federation-sponsored research

(a) assessment of the relationships among teachers' working conditions, teacher performance, and student learning in Ontario and

(b) estimates of the incidence of teacher burnout among elementary teachers in Ontario and how this can be effectively ameliorated.

Evidence in this review was collected from teachers in many different locations in the world, only a small portion of it from Ontario elementary teachers. While this feature of the evidence adds considerably to the general application or external validity of the results, it tells us very little about how the specific features of teacher working conditions in Ontario might be affecting teacher performance and student learning.

This is a recommendation, then, to follow up the empirical work carried out on ETFO's behalf by Matsui concerning teacher workload, with a broader study of Ontario elementary teachers' working conditions and how these relate to teacher and student performance. Reinforcing and extending the results of this review with such original evidence from Ontario would be of considerable value in helping ETFO to develop programs and services for its membership.

The results of such research could also play a significant role in identifying and justifying some future goals ETFO might establish for its bargaining with districts and its lobbying with government.

These same purposes also would be served by ETFO-sponsored research concerned, in particular, with the incidence and amelioration of teacher burnout. While such a focus could be subsumed within a larger study of working conditions, burnout deserves serious attention, one way or another, because of the alarming levels of occurrence reported in other educational jurisdictions and the devastating effects it can have on teachers who succumb to it, and on their students.

Further develop close working relationships with principal associations.

Principal leadership emerged as one of the most important working conditions for teachers, with significant effects on most internal states experienced by teachers. Furthermore, research into working conditions identified quite specific leadership practices that contribute positively to teachers' feelings, as well as to their performance in the school and classroom.

The best interests of both ETFO members and members of the three provincial principals' associations would be served by a close advisory relationship in at least the design, if not also the delivery, of professional development opportunities for principals. Such professional development should include greater attention to the contribution that supportive teacher working conditions make to the effectiveness of schools and the part principals are able to play in the development of those working conditions.

All the evidence says that school leadership needs to be shared among administrators and teachers.

For Principals and Administrators

Develop more positive teacher working conditions as your prime strategy for minimizing voluntary teacher mobility and reducing attrition from the profession.

Job satisfaction and organizational commitment are closely related states with powerful effects on teachers' decisions about whether or not to remain at their schools and in the profession. Those administrators especially concerned about minimizing teachers' desires to change schools or to find other forms of employment should focus their efforts on those things that evidence shows influences teachers' decisions. For example:

- keeping teachers' overall pupil load manageable
- ensuring that teachers are able to teach in their areas of expertise whenever possible
- developing school-wide supports for dealing with student misbehaviour
- allowing teachers as much autonomy as possible over their instructional duties
- ensuring teachers have the opportunity to participate in school decision making
- fostering a positive school atmosphere
- helping teachers develop productive relationships with parents

These are the most alterable of the working conditions influencing teacher retention and attrition.

Eliminate those working conditions that most threaten student learning.

This recommendation is an extension of the recommendation proposed to policy makers, since administrators also influence working conditions

that seriously threaten teacher performance and student learning. Of the eight internal teacher states examined, stress and burnout are the greatest direct threat to teacher performance and indirect threat to student learning. Stress and burnout are the consequence of teachers' perception that they are overloaded with work. This perception is caused by excessive demands, unreasonable constraints, and lack of social support.

EXCESSIVE DEMANDS arise not only from asking teachers to implement new policies and practices in their classrooms and schools. Such demands are even more commonly a function of what teachers are expected to do in the school outside of their classrooms — managing extracurricular activities, lunch duty, hall monitoring, school plays, being on school improvement teams, school councils, and the like.

Many of these activities are essential to an effective school. But often a few teachers take on a huge proportion of the work and some take on almost none. At minimum, then, this recommendation is to ensure that those who volunteer for everything are saved from themselves and those who volunteer for almost nothing take on their fair share.

This recommendation also speaks to the buffering function of administrators, found to be such an important working condition for teachers. A critical role for school and district administrators is to screen out external demands for change unrelated to the school's improvement priorities, without being patronizing about it.

This filtering saves teachers the frustration and aggravation of somehow responding to everything those many outside people and groups think they should be doing. Historically, schools have been the default institution people gravitate toward when they have a social problem in need of fixing and no other institution is clearly responsible. Childhood obesity and large numbers of children unable to swim are among the most prominent examples of such problems this year.

UNREASONABLE CONSTRAINTS reduce the situations in which teachers have to use their experience and their know-how to make the most out of sometimes unreasonable circumstances. Coping with an excessive

workload is easier if you have a lot of discretion in how to carry out your job. Burnout is more likely when working conditions are perceived to constrain that discretion as do, for example,

- inflexible rules
- hierarchical administrative structures
- prescriptive mandates related to one's work
- autocratic administration

Lighten up. You are very unlikely to get fired for being flexible and you will mostly find good things happen — for which you will get some of the credit.

LACK OF SUPPORT also breeds stress. Job satisfaction, a sense of being good at what you are doing, and the likelihood of continuing in the job are all threatened when teachers have difficulty seeing the fruits of their labours. Teachers are just like any other employee group in this respect, but may have even more difficulty than some because of the often long-term nature of the outcomes they are trying to accomplish with their students. These important internal states of teachers are also threatened when working conditions are perceived to make it harder — or seemingly impossible — to do the job.

Under these circumstances, nothing helps teachers through their self-doubts and the potential threats to the satisfaction they experience from their work like supportive friends, family, and colleagues. Administrators are especially important colleagues for teachers, and their support is crucial. Sometimes the best thing you can be for your teacher colleagues is a cheerleader, counsellor, and encourager rather than an instructional leader.

Build your approach to leadership on the best available evidence.

Leadership is a particularly hot topic out of which has come a huge pool of literature. An especially prominent finding from the evidence in this review is the crucial environment for teachers' work provided by principals. One of the recommendations for teachers is that they should expect, indeed, *insist on* effective leadership from their administrators.

What is effective leadership?

The literature on educational leadership appears, on the surface, to be not just overwhelming in volume but also confusingly diverse in how it conceptualizes effective leadership. But this is because there are several different genres of leadership literature, not all of which provide equally trustworthy advice to guide your practice.

To build your approach to leadership on the best evidence available means to narrow the focus of the advice to the "robust empirical evidence" genre. Narrowing your attention in this way reduces the vast quantity of leadership literature by about 90% because it rules out the "individual war story" genre, the "brave new visions of leadership for the future" genre, and the "leadership by adjective" genre.

One of the many benefits of narrowing your focus in this way is that you are left with a core set of leadership practices that are important in almost all organizational contexts — setting direction, helping people, redesigning the organization, and managing the instructional program.[1]

All Research Is Not Created Equal

Building your approach to leadership on the best available evidence, this final recommendation, is good advice for everyone, and an appropriate place to end. All research is not created equal, and one of the most important roles of a review is to determine the legitimacy of the research that provides evidence and then results.

This has been done with recommendations based on evidence. Which research is good and which studies are legitimate have been determined. Explanations and results have been provided.

There is good evidence to show that teachers' working conditions matter because they have a direct effect on teachers' thoughts and feelings — their sense of individual professional efficacy, of collective professional efficacy, of job satisfaction; their organizational commitment, levels of stress and burnout, morale, engagement in the school or profession; and their pedagogical content knowledge. These internal states are an important factor in what teachers do and have

a direct effect on what happens in the classroom, how well students achieve, and their experience of school. “Teachers’ working conditions are students’ learning conditions.” Working conditions matter!

NOTES

To keep this report readable, endnotes have been chosen as the citation method, using the *Chicago Manual of Style*, 15th ed. as the guide. Where the source is clear from the text, no endnote is inserted, and the source can be found in the full reference list. Whenever the source is unclear, or when a direct quote is used, an endnote is inserted.

1. CAN THIS REPORT HELP YOU?

[1] This claim is attributed to North Carolina's Governor Easley. Hirsch, "Teacher Working Conditions," 8.

[2] O'Day, "Incentives and Student Performance."; Rowan, "Standards as Incentives for Instructional Reform."

[3] For articles about situated learning, see Anderson, Reder, and Simon, "Situated Learning and Education," 5–11; Cobb and Bowers, "Cognitive and Situated Learning Perspectives," 4–15.

Situated learning explanations assume that what people learn depends on their interactions with features of their contexts and participation in a "community of practice." For this discussion, see Brown, Collins, and Duguid, "Situated Cognition and the Culture of Learning," 32–42. And because people's knowledge is socially constructed, such features of the organization as, for example, its norms, beliefs, operating procedures and even it physical characteristics shape what its

individual members know and are able to do. For this discussion, see Leithwood, *Understanding Schools as Intelligent Systems*, 8.

2. HOW DO WORKING CONDITIONS AFFECT TEACHERS?

[1] Ross, "Strategies for Enhancing Teachers' Beliefs," 227–251; Tschannen-Moran, Woolfolk Hoy, and Hoy, "Teacher Efficacy: Its Meaning and Measure," 202–248; Tschannen-Moran, and Woolfolk Hoy, "Teacher Efficacy: Capturing an Elusive Construct," 783–805; Goddard and Goddard, "A Multilevel Analysis," 807–818; Mathieu and Zajac, "A Review and Meta-analysis," 171–194.

[2] Ross, Hogaboam-Gray, and Hannay, "Effects of Teacher Efficacy on Computer Skills," 141–162.

[3] Berman et al., cited in Tschannen-Moran, Woolfolk Hoy, and Hoy, "Teacher Efficacy: Its Meaning and Measure." 202–248. The concept of individual teacher efficacy can be traced to the seminal works of Armor et al, *Analysis of the School Preferred Reading Programs;* and Bandura, "Self-Efficacy: Toward a Unifying Theory," 191–215.

[4] See Mathieu and Zajac, "A Review and Meta-analysis," 171–194, for research on organizational commitment. See Tschannen-Moran, Woolfolk Hoy, and Hoy, "Teacher Efficacy: Its Meaning and Measure," 202–248, for the similar results found among teachers. See Parkay, Greenwood, Olejnik, and Proller, "A Study of the Relationship," 13–22, for the results showing low levels of teacher self-efficacy associated with feelings of stress.

[5] Bandura, *Self-Efficacy in Changing Societies.*

[6] The examples are as summarized in Goddard and Goddard, "A Multilevel Analysis," 807–818.

[7] The body of evidence that associates higher levels of individual teacher self-efficacy with higher levels of student achievement includes Armor et al, *Analysis of the School Preferred Reading Programs;* Gibson and Dembo, "Teacher Efficacy: A Construct Validation," 569–582; Ross, "The Antecedents and Consequences of Teacher Efficacy," 49–74; Anderson, Greene, and Loewen, "Relationships among Teachers' and Students' Thinking Skills," 148–165; Ashton and Webb, *Making a Difference.* See Esselman and Moore, "In Search of Organizational Variables," for the evidence of more positive attitudes toward school, subject matter and teachers, and lower rates of suspension and dropouts.

[8] Glickman and Tamashiro, "A Comparison of First Year, Fifth Year, and Former Teachers," 558–562.

[9] See Tschannen-Moran, Woolfolk Hoy, and Hoy, "Teacher Efficacy: Its Meaning and Measure," 202–248, regarding principals' leadership as a strong influence on teachers' self-efficacy beliefs. See Leithwood and Jantzi, "A Review of Transformational School Leadership Research," for models of transformational leadership. For examples of studies that have tested the effects of this approach to leadership on individual teacher efficacy, see Hipp, "Teacher Efficacy: Influence of Principal Leadership Behavior"; Hipp and Bredeson, "Exploring Connections," 136–150; and Mascall, "Leaders Helping Teachers Helping Students."

[10] Goddard, Hoy, and Woolfolk Hoy, "Collective Teacher Efficacy," 479–507; Tschannen-Moran, Woolfolk Hoy, and Hoy, "Teacher Efficacy: Its Meaning and Measure," 202–248.

[11] Goddard, "Collective Efficacy," 467.

[12] The model is adapted from earlier work on individual teacher efficacy. Tschannen-Moran, Woolfolk Hoy, and Hoy, "Teacher Efficacy: Its Meaning and Measure," 202–248.

[13] The four studies regarding variations in both mathematics and reading achievement are reported by: Goddard, "Collective Efficacy," 467; Goddard, Hoy, and Woolfolk Hoy, "Collective Teacher Efficacy," 479–507; and Tschannen-Moran and Barr, "Fostering Student Achievement," 187–207.

[14] As in the findings in the case of individual teacher efficacy in Bandura, "Self-Efficacy: Toward a Unifying Theory of Behavioral Change," 191–215, collective efficacy is believed to arise from several sources. This same study finds that mastery experiences for groups of teachers are a function of a number of working conditions including significant participation in school decision making, feedback on the group's performance, clear and explicit goals for judging the group's success, and strong leadership.

[15] The findings regarding effects of mastery experiences on teacher collective efficacy (mastery experiences explain about two thirds of the variation across schools in such efficacy, outweighing the effects of student prior achievement and many demographic student characteristics) are from Goddard, "Collective Efficacy," 467, his study of 452 teachers from 47 urban elementary schools.

[16] The 2004 study of 2,170 Ontario elementary teachers is Ross, Hogaboam-Gray, and Gray, "Prior Student Achievement, Collaborative School Processes and

Collective Teacher Efficacy," 163–188. The quotation is found on page 163. Ross and his colleagues argue that such conditions influence teachers' cognitions about mastery experiences, offer vicarious experiences, persuasion, and protect teachers from excessively negative emotional states.

17 The summary of empowering principal leadership practices comes from Tschannen-Moran and Barr, "Fostering Student Achievement," 187–207. Ross and Gray, "Transformational Leadership," collects evidence from 3,074 Ontario teachers in 218 elementary schools to inquire about the relationships among principals' transformational leadership practices, teachers' commitment to community partnerships and teachers' commitment to their schools. The study finds that transformational leadership practices have a significant impact on teachers' collective efficacy and both direct and indirect effects on teacher commitment to school and to community partnerships.

18 Locke, "The Nature and Causes of Job Satisfaction," 1297–1349; Schnake, "Organizational Citizenship," 735–759.

19 In order of appearance the definitions for job satisfaction come from: Locke, "The Nature and Causes of Job Satisfaction," 1300; Evans, cited in Rhodes, Nevill, and Allan, "Valuing and Supporting Teachers," 68; and Currivan, "The Causal Order of Job Satisfaction," 495–524. As these definitions imply, job satisfaction is often viewed as a global variable, as in this report.

But there has been some research exploring more specific sources or forms of satisfaction including intrinsic sources, supervision, coworkers, promotion, pay, and the work itself. See, for example, Mathieu and Zajac, "A Review and Meta-analysis," 171–194. Motivation and job satisfaction are related concepts, but Miskel and Ogawa, "Work Motivation, Job Satisfaction and Climate," 279–304, arguing for the importance of distinguishing between them, suggest that motivation is a direct cause of behaviour whereas job satisfaction is not. Although one may feel satisfied with one's job through, for example, the experience of various job-related rewards, one may not necessarily act on that satisfaction.

20 For examples of the evidence that indicates job satisfaction's effect on teacher retention, see Stockard and Lehman, "Influences on the Satisfaction and Retention," 742–771. See Ostroff, "The Relationship between Satisfaction, Attitudes and Performance," 963–974, for the indirect effect of job satisfaction on student learning. See Organ, "The Motivational Basis of Organizational Citizenship Behavior," 43–72, for the effects on teachers' school-wide behaviour.

21 See Locke, "The Nature and Causes of Job Satisfaction," 1297–1349, regarding research portraying the relationship between job satisfaction and performance

as weak. But see Ostroff, "The Relationship between Satisfaction, Attitudes and Performance," 963–974, for findings that job satisfaction is the best predictor of student achievement among all the attitudinal variables measured.

[22] While there is a more detailed review of research, in the discussion of commitment, about the relationships among job satisfaction, organizational commitment, and both the intent to leave the job and the actual behaviour of leaving, it is worth noting here that the effects of satisfaction on decisions to remain in or leave the organization or profession are significant (for example, see Ingersoll, "Teacher Turnover and Teacher Shortages," 499–534; Ingersoll, *Teacher Turnover, Teacher Shortages, and the Organization of Schools*), although often considered to be largely indirect through organizational commitment.

[23] Organ, "The Motivational Basis of Organizational Citizenship Behavior," 43–72; Schnake, "Organizational Citizenship," 735–759; and Bateman and Organ, "Job Satisfaction and the Good Soldier," 587–595.

There are two explanations for the contribution of job satisfaction to organizational citizenship behaviours (OCBs). One explanation is that when people experience satisfying conditions in their workplaces, many will seek to reciprocate with those they perceive responsible for those conditions. A second explanation is that the sorts of prosocial behaviours included in OCBs are more likely when people experience positive effects. General examples of OCBs include helping a colleague who is falling behind in her job, being cooperative with administrators, contributing to a positive emotional tone in the workplace, and not wasting time.

[24] The prevailing two-factor theory of teacher satisfaction challenged by the research of Dinham and Scott, in "A Three Domain Model," 362–378; and in "Moving into the Third, Outer Domain of Teacher Satisfaction," 379–396, originated in research with engineers and accountants by Herzberg, Mausner, and Snyderman, *The Motivation to Work;* and with teachers in research by Sergiovanni, "Factors Which Affect Satisfaction," 66–81.

[25] Dinham and Scott, "Moving into the Third, Outer Domain of Teacher Satisfaction," 379.

[26] Dinham and Scott's findings are consistent with those of Poppleton, Gershunsky, and Pullin, "Changes in Administrative Control," 323–346.

[27] Hackman and Oldham, "Development of the Job Satisfaction Survey," 159–170.

[28] Ingersoll's results are reported in two separate publications: Ingersoll, "Teacher Turnover and Teacher Shortages," 499–534; Ingersoll, *Teacher Turnover, Teacher Shortages, and the Organization of Schools.*

[29] The Prince Edward Island study is Belliveau, Liu, and Murphy, "Teacher Workload on Prince Edward Island." The evidence regarding the decline in job satisfaction comes from Naylor and Schaefer, *Worklife of British Columbia Teachers*.

[30] Matsui, "ETFO Worklife Study," iv.

[31] Leithwood, Menzies, and Jantzi, "Earning Teachers' Commitment to Curriculum Reform," 41.

[32] Kushman, "The Organizational Dynamics of Teacher Workplace Commitment," 9.

[33] Dannetta, "What Factors Influence a Teacher's Commitment to Student Learning?" 144–171.

[34] Mowday, Steers, and Porter, "The Measurement of Organizational Commitment," 145.

[35] The evidence suggesting job satisfaction causes organizational commitment and that working conditions have indirect effects on commitment is from Williams and Hazer, "Antecedents and Consequences of Satisfaction and Commitment in Turnover Models," 219–231. The contrary evidence is found in, for example, Bateman and Strasser, "Longitudinal Analysis of the Antecedents of Organizational Commitment," 95–112.

[36] Williams and Hazer, "Antecedents and Consequences of Satisfaction and Commitment in Turnover Models," 219. See Koch and Steers, "Job Attachment, Satisfaction and Turnover," 119–128, regarding concepts of job commitment and job attachment.

[37] For studies that identify teacher commitment as a contributor to student achievement, see Dannetta, "What Factors Influence a Teacher's Commitment to Student Learning?" 144–171; Rosenholtz, T*eachers' Workplace: The Social Organization of Schools;* and Kushman, "The Organizational Dynamics of Teacher Workplace Commitment," 5–42. For the research linking greater organizational commitment to employee retention, see Porter, Steers, Mowday, and Boulian, "Organizational Commitment, Job Satisfaction, and Turnover among Psychiatric Technicians," 603–609; Angle and Perry, "Empirical Assessment of Organizational Commitment and Organizational Effectiveness,"; Williams and Hazer, "Antecedents and Consequences of Satisfaction and Commitment in Turnover Models," 219–231; and Currivan, "The Causal Order of Job Satisfaction," 495–524. For links to job search activities and absenteeism, see Bateman and Strasser, "Longitudinal Analysis of the Antecedents of Organizational Commitment,"

95–112; and for links to perceptions of organizational effectiveness, see Hoy and Ferguson, "A Theoretical Framework and Exploration of Organizational Effectiveness of Schools," 117–113.

[38] Wright and Bonett, "The Moderating Effects of Employee Tenure," 1183–1190, their 2002 meta-analysis about job performance and organizational commitment, find that, controlling for employees' average age, the correlations between tenure and organizational commitment are .437, .161 and .041 for 1, 5 and 10 years of tenure, respectively.

[39] A helpful point of departure for understanding the results of research guided by the expectancy and social exchange theories is the meta-analysis (much of it carried out prior to about 1990) by Mathieu and Zajac, "A Review and Meta-analysis," 171–194. This analysis begins with some 48 determinants, correlates and consequences of commitment, based on 124 published studies and classified as role states, job characteristics, group/leader relations, and organizational characteristics.

With respect to role states, results indicate that commitment is moderately and negatively associated with routinization (lack of variety in the nature of the tasks undertaken), role ambiguity (lack of clarity about one's responsibilities and accountabilities), role conflict (difference of opinion about what the job entails) and excessive workload. Demonstrating a moderately positive relationship with commitment is autonomy in deciding how to carry out one's job, along with peer and supervisor support. Higher pay is not a determinant of either satisfaction or commitment.

The job characteristics reviewed in this meta-analysis are drawn primarily from Hackman and Oldham's, "Development of the Job Satisfaction Survey," 159–170, job characteristics model, which suggests that "enriched" jobs are likely to produce higher levels of organizational commitment. Previous research typically supports the value of this model. Features of an enriched job, according to this model, are skill variety (results of the meta-analysis indicate a moderately positive correlation with commitment), task autonomy (a small positive correlation, according to the analysis), challenge (not tested for lack of data) and job scope (which demonstrates a strong positive correlation with commitment, in the meta-analysis).

Results of Mathieu and Zajac's meta-analysis also indicate significant positive relations between organizational commitment and a small handful of group/leader relationships including task interdependence: "When employees experience high functional dependence, they become more aware of their own contributions to the organization and to their immediate work group. This heightened awareness may enhance employees' ego involvement and thereby increase their [organizational commitment]"; leader initiating structure and consideration;

leader communication: "A supervisor who provides more accurate and timely types of communication enhances the work environment and thereby is likely to increase employees' commitment to the organization" (179–180); and participatory leadership.

Results of the meta-analysis suggest, finally, no significant relationships between organizational commitment and the two organizational conditions for which data were available, size and centralization.

Other than Dannetta's review, "What Factors Influence a Teacher's Commitment to Student Learning?" 144–171, the reports describing effects on teachers' organizational commitment of perceptions that the job is doable but challenging, the amount of feedback provided to teachers about their performance, and the amount of social interaction and role conflict which they perceive are the following: Buchanan, "Building Organizational Commitment," 533–546; and Hall, Schneider, and Nygren, "Personal Factors in Organizational Identification," 176–189.

[40] Evidence about the antecedents of teachers' commitment to student learning can be found in many original sources such as Menzies, "Teacher Commitment in Colleges of Applied Arts and Technology"; Kushman, "The Organizational Dynamics of Teacher Workplace Commitment," 5–42; Rosenholtz, *Teachers' Workplace: The Social Organization of Schools;* and Reyes and Imber, "Teachers' Perceptions of the Fairness of their Workload," 291–302.

[41] Buchanan, "Building Organizational Commitment," 533–546; Hall, Schneider, and Nygren, "Personal Factors in Organizational Identification," 176–189.

[42] Nguni, Sleegers, and Denessen, "Transformational Leadership Effects on Teachers' Job Satisfaction." (In press); Nir, "School Health and Its Relation to Teacher Commitment," 106–126.

[43] The reviews are: Kyriacou, "Teacher Stress: Directions for Future Research," 27–35; and Leithwood, Menzies, Jantzi, and Leithwood, "School Restructuring, Transformational Leadership and the Amelioration of Teacher Burnout," 199–215.

[44] Cunningham, "Teacher Burnout — Solutions for the 1980s," 37–49; and Byrne, "Burnout: Investigating the Impact of Background Variables," 197–209.

[45] Dworkin, "Coping with Reform," 77.

[46] Blasé and Greenfield, "How Teachers Cope with Stress," 1–5; Farber and Miller, "Teacher Burnout," 235–243.

[47] Dworkin, "Coping with Reform," 473.

[48] Schlansker, "A Principal's Guide to Teacher Stress," 32–34; Friedman and Farber, "Professional Self-Concept as a Predictor of Teacher Burnout," 28–35; Dworkin, "Coping with Reform," 459–498.

[49] Byrne, "Burnout: Investigating the Impact of Background Variables," 197–209; Leithwood, Menzies, Jantzi, and Leithwood, "School Restructuring, Transformational Leadership and the Amelioration of Teacher Burnout," 199–215. The studies conducted after 1996 include Brouwers and Tomic, "A Longitudinal Study of Teacher Burnout," 239–253; Kyriacou, "Teacher Stress: Directions for Future Research," 27–35; Moriarty, Edmonds, Blatchford, and Martin, "Teaching Young Children: Perceived Satisfaction and Stress," 33–46; Tatar and Horenczyk, "Diversity-Related Burnout among Teachers," 397–408; Sava, "Causes and Effects of Teacher Conflict-Inducing Attitudes Towards Pupils," 1007–1021; Hastings and Bham, "The Relationship between Student Behaviour Patterns and Teacher Burnout," 115–127; Rosenblatt, "Teachers' Multiple Roles and Skill Flexibility," 684–708; Chan, "Stress, Self-Efficacy, Social Support, and Psychological Distress," 557–569; and Jacobsson, Pousette, and Thylefors, "Managing Stress and Feelings of Mastery among Swedish Comprehensive School Teachers," 37–53.

[50] Byrne, "Burnout: Investigating the Impact of Background Variables," 200.

[51] See also Matsui, "ETFO Worklife Study," for factors with time constraints.

[52] Leithwood, Menzies, Jantzi, and Leithwood, "School Restructuring, Transformational Leadership and the Amelioration of Teacher Burnout," 199–215.

[53] The two reviews carried out in education contexts are Lumsden, "Teacher Morale," and Black, "Morale Matters," 40–43. See Locke, "The Nature and Causes of Job Satisfaction," 1297–1349, for a review done in a non-education context.

[54] Reyes and Imber, "Teachers' Perceptions of the Fairness of Their Workload," 293; Evans, "Understanding Teacher Morale and Job Satisfaction," 832; Hoy, Tarter, and Kottkamp, *Open Schools/Healthy Schools,* 183.

Locke, "The Nature and Causes of Job Satisfaction," 1300, considers morale to be "…an attitude of satisfaction with, desire to continue in, and willingness to strive for the goals of a particular group or organization"; it is "…the feeling a worker has about his job based on how the worker perceives himself in the organization and the extent to which the organization is viewed as meeting the worker's needs and expectations" (from Washington and Watson, cited in Lumsden, "Teacher Morale,"2).

[55] See Black, "Morale Matters," 40–43.

[56] For examples of poor morale's association with less effective teaching performance, see Reyes and Imber, "Teachers' Perceptions of the Fairness of Their Workload," 291–302; with teacher absenteeism, and resistance to change, see Briggs and Richardson, "Causes and Effects of Low Morale among Secondary Teachers,"; and with teacher turnover, see Rafferty, "The Effects of Teacher Morale on Teacher Turnover Rates."

[57] Weiss, "Perceived Workplace Conditions and First-Year Teachers' Morale," 861–879, study is the main source for this section. See also Reyes and Imber, "Teachers' Perceptions of the Fairness of Their Workload," 291–302, regarding positive morale and teachers' perceptions of the fairness of their workloads; and Baylor and Ritchie, "What Factors Facilitate Teacher Skill?" 395–414, regarding positive morale and teachers' perceptions.

[58] Nir, "School Health and Its Relation to Teacher Commitment," 106–126.

[59] Macdonald, "Teacher Attrition: A Review of Literature," 835–848.

[60] See Stockard and Lehman, "Influences on the Satisfaction and Retention," 742–771.

[61] Ingersoll, "Teacher Turnover and Teacher Shortages," 9. See also Ingersoll, "Teacher Turnover and Teacher Shortages," 499–534, and Ingersoll, T*eacher Turnover, Teacher Shortages, and the Organization of Schools.*

[62] Ingersoll, "Teacher Turnover and Teacher Shortages," 19.

[63] Loeb, Darling-Hammond, and Luczak, "How Teaching Conditions Predict Teacher Turnover in California Schools," 45.

[64] See Theobald, "An Examination of the Influence of Personal, Professional and School District Characteristics," 241–250; Pogodzinski, *The Teacher Shortage;* and Loeb, "How Teachers' Choices Affect What a Dollar Can Buy," for the effects of low salaries, especially relative to other nearby districts. See Ingersoll, "Teacher Turnover and Teacher Shortages," 499–534, for employment opportunities outside teaching. See Wright, "Retaining Teachers in Technology Education,"; and Bempah, Kaylen, Osburn, and Birkenholz, "An Econometric Analysis of Teacher Mobility," 69–77, for leadership style of principal/lack of support from school administrators. See Shen, "Teacher Retention and Attrition from Public Schools," 33–39, for lack of autonomy and for lack of influence on school decisions. See Seyfarth and Bost, "Teacher Turnover and the Quality of Worklife in Schools," 1–6, for inadequate facilities. See Hanushek, Kain, and Rivkin, *Why Public Schools Lose Teachers,* for student characteristics: for example, race, apathy, indiscipline

and low achievement. See Hirsch, "Listening to the Experts"; Hirsch, "Teacher Working Conditions Are Student Learning Conditions," for lack of access to professional development. See Buckley, Schneider, and Shang, "Fix It and They Might Stay," 1107–1123, for low status of the profession in the community, for poor relationships with parents and the community, for negative images of teaching in the popular media, for burden of non-teaching duties, and for government policies (erratic and unresponsive) creating confusion and uncertainty. See Mont and Rees, "The Influence of Classroom Characteristics on High School Teacher Turnover," 152–167, for class load including average class size and teaching outside one's area of certification. See Tye and O'Brien, "Why Are Experienced Teachers Leaving the Profession?" 24–32, for accountability and increased use of high-stakes tests.

[65] See Walsh, *Teacher Certification Reconsidered,* for those who hold the view that teaching is a relatively simple task. For those who view teaching as a complex act, see Darling-Hammond, Wise, and Pease, "Teacher Evaluation in the Organizational Context," 285–237.

[66] See Phillips, *Teacher Quality in Canada*, for an example of the first strand of research; Darling-Hammond, "Standard Setting in Teaching," 751–776. For more on the second strand, see Wilson, Floden, and Ferrini-Mundy, *Teacher Preparation Research: Current Knowledge, Gaps, and Recommendations.*

[67] Shulman, "Knowledge and Teaching: Foundations of the New Reform," 1–22.

3. WORKING CONDITIONS THAT MATTER

[1] The studies for the action-oriented evidence collected from Canadian teachers in Ontario are Matsui, "ETFO Worklife Study"; and Leithwood, McAdie, et al., *Teaching for Deep Understanding;* in Newfoundland and Labrador, Dibbon, "It's About Time"; in British Columbia, Naylor, Schaefer, and Malcolmson, eds., *Worklife of British Columbia Teachers* (Naylor and Schaefer also published results of this study in 2003); in Saskatchewan, Saskatchewan Teachers' Federation, *A Study of the Workload and Worklife of Saskatchewan Teachers: Principals;* in Nova Scotia, Harvey and Spinney, *Life On and Off the Job;* and in Prince Edward Island, Belliveau, Liu, and Murphy, "Teacher Workload on Prince Edward Island." References to these studies and the two Hirsch studies (North and South Carolina) are not repeated here unless there could be some ambiguity as to which one is being referenced.

This third chapter synthesizes what was learned about teacher working conditions from the review of theory-oriented research, adds the results of recent action-oriented research and offers, with selected working conditions, further comment and discussion.

The results of the studies conducted by The Southeast Center for Teaching Quality (SECTQ) are taken from Hirsch, "Listening to the Experts"; Hirsch, "Teacher Working Conditions Are Student Learning Conditions."

[2] The North Carolina study builds on research carried out several years earlier in that state and provides the framework, research design, and most of the instrumentation for the South Carolina study. Evidence for the North Carolina study, for example, is provided, through an online survey of 34,000 elementary, middle and high school teachers, a remarkable 90% response rate. The survey instrument (further modified for use in South Carolina) was carefully designed from substantial previous work with focus groups of teachers who identified specific working condition domains including time, empowerment, facilities and resources, professional development, leadership, and collegial atmosphere. Multiple questions on the survey assessed teachers' opinions about conditions in each of these domains.

In addition to describing teachers' opinions about their working conditions, this study examines the relationships between such views and measures of student achievement, as well as student retention in high school. Achievement measures include school progress in meeting annual yearly progress targets and performing well on state-administered achievement tests. Several forms of regression analysis were undertaken to assess the relationships among working conditions, student achievement, and student retention. Results of both studies are reported in this section of the review.

[3] The evidence for Alberta comes from Vogrinetz, *Alberta Teachers, a Workload Study;* the Ontario statistics are from Matsui, "ETFO Worklife Study"; and the New Brunswick numbers come from LeBlanc, "The Workload and Conditions of Work of New Brunswick Teachers."

[4] See Matsui, "ETFO Worklife Study"; and Naylor and Schaefer, *Worklife of British Columbia Teachers,* for the proportions of teachers across Canada who report increases in their volume of work over the past half dozen years. See Naylor and Schaefer, *Worklife of British Columbia Teachers;* and Dibbon, "It's About Time," for the proportions of teachers who identify increases in the size of their workloads, or lack of time to do their work, to be a significant source of stress. See Belliveau, Liu, and Murphy, "Teacher Workload on Prince Edward Island," regarding teachers who believe that demands on their time have been increasing because of the need to implement new curricula, learn and use new technology, cope with increases in student discipline, take on greater numbers of administrative tasks, and include more special needs students in regular classes.

[5] For work intensification, see Hargreaves, "Time and Teachers' Work," 87–108; Dibbon, "It's About Time."

[6] See Dibbon, "It's About Time," for insufficient preparation time, excessively large classes, disruptive students, and inappropriate assignments. See Harvey and Spinney, *Life On and Off the Job,* for insufficient preparation time, disruptive students. See Leithwood, McAdie, et al., for excessively large classes. See Matsui, "ETFO Worklife Study," for insufficient preparation time, excessively large classes. See Naylor and Schaefer, *Worklife of British Columbia Teachers,* for excessively large classes; class composition; unmet needs of students; effects on students' aspirations, behaviour and readiness for learning of dysfunctional family environments; split or multi-grade classes, especially for elementary teachers; and inadequate levels of learning resources.

[7] See Harvey and Spinney, *Life On and Off the Job.*

[8] The sample of Ontario teachers quoted regarding a collegial school atmosphere is from Leithwood, McAdie, et al., *Teaching for Deep Understanding.* See also Hirsch, "Listening to the Experts" and Hirsch, "Teacher Working Conditions Are Student Learning Conditions."

[9] Hirsch, "Listening to the Experts," 25. OR Hirsch, "Teacher Working Conditions Are Student Learning Conditions," 25.

[10] Rosenholtz and Simpson, "Workplace Conditions and the Rise and Fall of Teachers' Commitment," 244–245.

[11] See DuFour, Eaker, DuFour, *On Common Ground;* and Louis and Kruse, *Professionalism and Community.*

[12] For examples, see Loucks-Horsley, Hewson, et al., *Designing Professional Development for Teachers of Science and Mathematics;* Boyle, Lamprianou, and Boyle, "A Longitudinal Study of Teacher Change," 1–27.

[13] See Belliveau, Liu, and Murphy, "Teacher Workload on Prince Edward Island," for Prince Edward Island reports. Arguments for the importance of empowerment, task autonomy, and discretion originate in the workplace performance theories of Hackman and Oldham, "Development of the Job Satisfaction Survey," 159–170; and Gecas and Schwalbe, "Beyond the Looking-Glass Self," 77–88. Autonomy and discretion, according to such theory, enhance commitment by "making people the main causal agents in their own performance" as stated in Rosenholtz and Simpson, "Workplace Conditions and the Rise and Fall of Teachers' Commitment," 244.

[14] See Hirsch, "Listening to the Experts"; Hirsch, "Teacher Working Conditions are Student Learning Conditions."

[15] The model around which the leadership practices in Table 4 have been organized is developed from, for example, Leithwood and Riehl, "What We Know about Successful School Leadership," 22–47; and Leithwood and Jantzi, "A Review of Transformational School Leadership Research.

[16] See Ingersoll, "Teacher Turnover and Teacher Shortages," 499–534;

[17] Dibbon, "It's About Time," 28.

[18] Leithwood, McAdie, et al., *Teaching for Deep Understanding.* On finding the school board's actions and attitudes stressful, see Naylor and Schaefer, *Worklife of British Columbia Teachers.*

[19] The findings about Ontario teachers' distrust come from Leithwood, Jantzi, and Steinbach, "School Leadership and Teachers' Motivation to Implement Accountability Policies," 94–119. The evidence regarding B.C. teachers is from Naylor and Schaefer, *Worklife of British Columbia Teachers.*

[20] Gidney, *From Hope to Harris: The Reshaping of Ontario's Schools.*

[21] For examples see, Earl, Watson, et al., *Watching and Learning 3.*

[22] Dworkin, "Coping with Reform," 459–498.

[23] Darling-Hammond, "Standard Setting in Teaching," 751.

[24] See Little, "Norms of Collegiality and Experimentation," 325–340; Hargreaves, "Time and Teachers' Work," 87–108.

[25] Feiman-Nemser and Floden, "The Cultures of Teaching," 505-526.

[26] Gérin-Lajoie, Wilson, and Lenouvel, "Policy Trends and Their Impact on the Work of Teachers and Principals in the Toronto Area."

[27] Booher-Jennings, "Below the Bubble," 260.

[28] Dworkin, "Coping with Reform," 461.

[29] Belliveau, Liu, and Murphy, "Teacher Workload on Prince Edward Island."

[30] Livingstone, Hart, and Davie, *Public Attitudes Towards Education in Ontario.*

[31] Matsui and Lang Research, "Bullying in the Workplace."

4. WHAT CAN BE DONE? RECOMMENDATIONS

[1] The literature about leadership practices is summarized in Leithwood and Riehl, "What We Know about Successful School Leadership," 22–47; and Leithwood, Seashore-Louis, et al., *How Leadership Influences Student Learning.*

REFERENCES

Anderson, J., L. Reder, and H. Simon. "Situated Learning and Education." *Educational Researcher* 25, no. 4 (1996): 5–11.

Anderson, R., M. Greene, and P. Loewen. "Relationships among Teachers' and Students' Thinking Skills, Sense of Efficacy, and Student Achievement." *Alberta Journal of Educational Research* 34, no. 2 (1988): 148–165.

Angle, H. L., and J. L. Perry. "An Empirical Assessment of Organizational Commitment and Organizational Effectiveness." *Administrative Science Quarterly* 26 (1981).

Armor, D., P. Conroy-Oseguera, M. Cox, N. King, L. McDonnell, A. Pascall, E. Pauly, and G. Zellman. *Analysis of the School Preferred Reading Programs in Los Angeles Minority Schools* (Rep. No. R-2007-LAUSD). Santa Monica, CA: Rand, 1976. (ERIC Document Reproduction Service No. 130 243).

Ashton, P., and R. Webb. *Making a Difference: Teachers' Sense of Efficacy and Student Achievement.* New York: Longman, 1986.

Bandura, A. "Self-Efficacy: Toward a Unifying Theory of Behavioral Change." *Psychological Review* 84 (1977): 191–215.

——. *Self-Efficacy in Changing Societies*. New York: Cambridge University Press, 1996.

——. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice Hall, 1997.

Bateman, J., and D. Organ. "Job Satisfaction and the Good Soldier: The Relationship between Affect and Employee 'Citizenship.'" *Academy of Management Journal* 26, no. 4 (1983): 587–595.

Bateman, T., and S. Strasser. "A Longitudinal Analysis of the Antecedents of Organizational Commitment." *Academy of Management Journal* 27, no. 1 (1984): 95–112.

Baylor, A., and D. Ritchie. "What Factors Facilitate Teacher Skill, Teacher Morale, and Perceived Student Learning in Technology-Using Classrooms?" *Computers and Education* 39 (2002): 395–414.

Belliveau, G., X. Liu, and E. Murphy. "Teacher Workload on Prince Edward Island." Charlottetown, PEI: PEI Teachers' Federation, 2002.

Bempah, E. O., M.S. Kaylen, D. D. Osburn, and R. J. Birkenholz. "An Econometric Analysis of Teacher Mobility." *Economics of Education Review* 13, no. 1 (1994): 69–77.

Black, S. "Morale Matters: When Teachers Feel Good about Their Work, Research Shows, Student Achievement Rises." *American School Board Journal* 188, no. 1 (2001): 40–43.

Blasé, J. J., and W. Greenfield. "How Teachers Cope with Stress: How Administrators Can Help." *Canadian Administrator* 25, no. 2 (1985): 1–5.

Booher-Jennings, J. "Below the Bubble: 'Educational Triage' and the Texas Accountability System." *American Journal of Educational Research* 42, no. 2 (2005): 231–268.

Boyle, B., I. Lamprianou, and T. Boyle. "A Longitudinal Study of Teacher Change: What Makes Professional Development Effective? Report of the Second Year of the Study." *School Effectiveness and School Improvement* 16, no. 1 (2005): 1–27.

Briggs, L. D., and W.D. Richardson. "Causes and Effects of Low Morale among Secondary Teachers." *Journal of Instructional Psychology* 19, no. 2 (1992).

Brouwers, A., and W. Tomic. "A Longitudinal Study of Teacher Burnout and Perceived Self-Efficacy in Classroom Management." *Teaching and Teacher Education* 16 (2000): 239–253.

Brown, J. S., A. Collins, and P. Duguid. "Situated Cognition and the Culture of Learning." *Educational Researcher* 18, no. 1 (1989): 32–42.

Buchanan, B. "Building Organizational Commitment: The Socialization of Managers in Work Organization." *Administrative Science Quarterly* 19 (1974): 533–546.

Buckley, J., M. Schneider, and Y. Shang. "Fix It and They Might Stay: School Facility Quality and Teacher Retention in Washington, D.C." *Teachers College Record* 107, no. 5 (2005): 1107–1123.

Byrne, B. M. "Burnout: Investigating the Impact of Background Variables for Elementary, Intermediate, Secondary and University Educators." *Teaching and Teacher Education* 7, no. 2 (1991): 197–209.

Chan, D. W. "Stress, Self-Efficacy, Social Support, and Psychological Distress among Prospective Chinese Teachers in Hong Kong." *Educational Psychology* 22, no. 5 (2002): 557–569.

Cobb, P., and J. Bowers. "Cognitive and Situated Learning Perspectives in Theory and Practice." *Educational Researcher* 28, no. 2 (1999): 4–15.

Crow, G., and D. Pounder. "Teacher Teams: Work Group Enhancement as a Teacher Involvement Strategy." Paper presented at the annual meeting of the American Educational Research Association, Chicago, 1997.

Cunningham, W. J. "Teacher Burnout — Solutions for the 1980s: A Review of the Literature." *The Urban Review* 15, no. 1 (1983): 37–49.

Currivan, D. "The Causal Order of Job Satisfaction and Organizational Commitment in Models of Employee Turnover." *Human Resources Management Review* 9, no. 4 (2000): 495–524.

Dannetta, V. "What Factors Influence a Teacher's Commitment to Student Learning?" *Leadership and Policy in Schools* 1, no. 2 (2002): 144–171.

Darling-Hammond, L. "Standard Setting in Teaching: Changes in Licensing, Certification, and Assessment." In *Handbook of Research on Teaching*, edited by V. Richardson, 751–776. Washington, DC: American Educational Research Association, 2001.

Darling-Hammond, L., A. E. Wise, and S. R. Pease. "Teacher Evaluation in the Organizational Context: A Review of the Literature." *Review of Educational Research* 53, no. 3 (1983): 285–237.

Dibbon, D. "It's About Time: A Report on the Impact of Workload on Teachers and Students." St. John's, NL: Memorial University of Newfoundland, 2004.

Dinham, S., and C. Scott. "A Three Domain Model of Teacher and School Executive Satisfaction." *Journal of Educational Administration* 36, no. 4 (1998): 362–378.

——. "Moving into the Third, Outer Domain of Teacher Satisfaction." *Journal of Educational Administration* 38, no. 4 (2000): 379–396.

DuFour, R., R Eaker, and R. DuFour, ed. *On Common Ground: The Power of Professional Learning Communities*. Bloomington, IN: National Education Services, 2005.

Dworkin, A. G. *Teacher Burnout in the Public Schools: Structural Causes and Consequences for Children*. Albany, NY: SUNY Press, 1987.

——. "Coping with Reform: The Intermix of Teacher Morale, Teacher Burnout, and Teacher Accountability." In *International Handbook of Teachers and Teaching,* edited by B. Biddle, T. Good and I. Goodson, 459–498. Dordrecht, The Netherlands: Kluwer Academic Press, 1997.

Earl, L., N. Watson, B. Levin, K. Leithwood, and M. Fullan. *Watching and Learning 3: Final Report of the External Evaluation of England's National Literacy and Numeracy Strategy*. Toronto, ON: OISE/University of Toronto, 2003.

Esselman, M., and W. Moore. "In Search of Organizational Variables Which Can be Altered to Promote an Increased Sense of Teacher Efficacy." Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1992.

Evans, L. "Understanding Teacher Morale and Job Satisfaction." *Teaching and Teacher Education* 13, no. 8 (1997): 831–845.

Farber, B., and J. Miller. "Teacher Burnout: A Psycho-educational Perspective." *Teachers College Record* 83, no. 2 (1981): 235–243.

Feiman-Nemser, S., and R. Floden. "The Cultures of Teaching." In *Handbook of Research on Teaching,* 3rd ed., edited by M. Wittrock, 505-526. New York: Macmillan Publishing, 1986.

Festinger, L. *A Theory of Cognitive Dissonance*. Evanston, IL: Row, Peterson, 1957.

Freudenberger, H. J. "Staff Burn-out." *Journal of Social Issues* 30 (1974): 159–165.

Friedman, I. A., and B. Farber. "Professional Self-Concept as a Predictor of Teacher Burnout." *Journal of Educational Administration* 86, no. 1 (1972): 28–35.

Gecas, V., and M. L. Schwalbe. "Beyond the Looking-Glass Self: Social Structure and Self-Efficacy Based Self-Esteem." *Social Psychology Quarterly* 46, no. 2 (1983): 77–88.

Gérin-Lajoie, D., D. Wilson, and C. Lenouvel. "Policy Trends and Their Impact on the Work of Teachers and Principals in the Toronto Area." Paper presented at the annual meeting of the American Educational Research Association, Montreal, QC., 2005.

Gibson, S., and M. Dembo. "Teacher Efficacy: A Construct Validation." *Journal of Educational Psychology* 76, no. 4 (1984): 569–582.

Gidney, R. D. *From Hope to Harris: The Reshaping of Ontario's Schools*. Toronto, ON: University of Toronto Press, 1999.

Glickman, C., and R. Tamashiro. "A Comparison of First Year, Fifth Year, and Former Teachers on Efficacy, Ego Development, and Problem Solving." *Psychology in Schools* 19 (1982): 558–562.

Goddard, R. "Collective Efficacy: A Neglected Construct in the Study of Schools and Student Achievement." *Journal of Educational Psychology* 93, no. 3 (2001): 467–476.

Goddard, R. D., and Y. L. Goddard. "A Multilevel Analysis of the Relationship between Teacher and Collective Efficacy in Urban Schools." *Teaching and Teacher Education* 17 (2001): 807–818.

Goddard, R., W. Hoy, and A. Woolfolk Hoy. "Collective Teacher Efficacy: Its Meaning, Measurement and Impact on Student Achievement." *American Educational Research Journal* 37, no. 2 (2000): 479–507.

Hackman, J., and G. Oldham. "Development of the Job Satisfaction Survey." *Journal of Applied Psychology* 60 (1975): 159–170.

Hall, D. T., B. Schneider, and H.T. Nygren. "Personal Factors in Organizational Identification." *Administrative Science Quarterly* 15 (1970): 176–189.

Hanushek, E. A., J. F. Kain, and S. G. Rivkin. *Why Public Schools Lose Teachers*. Cambridge, MA: National Bureau of Economic Research, 2001.

Hargreaves, A. "Time and Teachers' Work: An Analysis of the Intensification Thesis." *Teachers College Record* 94 (1992): 87–108.

Harvey, A., and J. Spinney. *Life On and Off the Job: A Time Study of Nova Scotia Teachers*. Halifax, NS: Saint Mary's University Time-Use Research Program, 2000.

Hastings, R., and M. S. Bham. "The Relationship between Student Behaviour Patterns and Teacher Burnout." *School Psychology International* 24, no. 1 (2003): 115–127.

Herzberg, F., B. Mausner, and B. Snyderman. *The Motivation to Work*. New York: John Wiley & Sons, 1959.

Hill, H. C., B. Rowan, and D. Ball. "Effects of Teachers' Mathematical Knowledge for Teaching on Student Achievement." *American Educational Research Journal* 42, no. 2 (2005): 371–406.

Hipp, K. "Teacher Efficacy: Influence of Principal Leadership Behavior." Paper presented at the annual meeting of the American Educational Research Association, New York, 1996.

Hipp, K., and P. Bredeson. "Exploring Connections between Teacher Efficacy and Principals' Leadership Behavior." *Journal of School Leadership* 5 (1995): 136–150.

Hirsch, E. "Listening to the Experts: A Report on the 2004 South Carolina Teacher Working Conditions Survey." Chapel Hill, NC: The Southeast Center for Teaching Quality, 2004.

——. "Teacher Working Conditions are Student Learning Conditions: A Report to Governor Mike Easley on the 2004 North Carolina Teacher Working Conditions Survey." Chapel Hill, NC: The Southeast Center for Teaching Quality, 2004.

Hoy, W. K., C. J. Tarter, and R. B. Kottkamp. *Open Schools/Healthy Schools: Measuring Organizational Climate.* Newbury Park, CA: Sage, 1991.

Hoy, W., and J. Ferguson. "A Theoretical Framework and Exploration of Organizational Effectiveness of Schools." *Educational Administration Quarterly* 21 (1985): 117–13.

Ingersoll, R. "Teacher Turnover and Teacher Shortages: An Organizational Analysis." *American Educational Research Journal* 38, no. 3 (2001a): 499–534.

——. *Teacher Turnover, Teacher Shortages, and the Organization of Schools*. Seattle, WA: University of Washington, Center for the Study of Teaching and Policy, 2001b.

Jacobsson, C., A. Pousette, and I. Thylefors. "Managing Stress and Feelings of Mastery among Swedish Comprehensive School Teachers." *Scandinavian Journal of Educational Research* 45, no. 1 (2001): 37–53.

Koch, J., and R. Steers. "Job Attachment, Satisfaction and Turnover among Public Sector Employees." *Journal of Vocational Behaviour* 12 (1978): 119–128.

Kushman, J. "The Organizational Dynamics of Teacher Workplace Commitment: A Study of Urban Elementary and Middle Schools." *Educational Administration Quarterly* 28, no. 1 (1992): 5–42.

Kyriacou, C. "Teacher Stress: Directions for Future Research." *Educational Review* 53, no. 1 (2001): 27–35.

Lasky, S., S. Moore, and S. Sutherland. "Teachers' Experience of Mandated Reform: Too Much Pressure and Too Little Support." *Research in Ontario Secondary Schools* 6, no. 3 (2001). Retrieved from *http://www.oise.utoronto.ca/fieldcentres/TVC/RossReports/vol6no3.htm.*

LeBlanc, C. "The Workload and Conditions of Work of New Brunswick Teachers." Fredericton, NB: New Brunswick Teachers Federation, 2000.

Leithwood, K., ed. *Understanding Schools as Intelligent Systems*. Stamford, CT: JAI Press Inc., 2000: 1–15

Leithwood, K., and Jantzi, D. "A Review of Transformational School Leadership Research, 1996–2005." Paper presented at the annual meeting of the American Educational Research Association, Montreal, 2005.

Leithwood, K., D. Jantzi, and R. Steinbach. "School Leadership and Teachers' Motivation to Implement Accountability Policies." *Educational Administration Quarterly* 38, no. 1 (2002): 94–119.

Leithwood, K., T. Menzies, and D. Jantzi. "Earning Teachers' Commitment to Curriculum Reform." *Peabody Journal of Education* 69, no. 4 (1994): 38–61.

Leithwood, K., T. Menzies, D. Jantzi, and J. Leithwood. "School Restructuring, Transformational Leadership and the Amelioration of Teacher Burnout." *Anxiety, Stress and Coping* 9 (1996): 199–215.

Leithwood, K., and C. Riehl. "What We Know about Successful School Leadership." In *A New Agenda: Directions for Research on Educational Leadership*, edited by W. Firestone and C. Riehl, 22–47. New York: Teachers College Press, 2005.

Leithwood, K., P. McAdie, N. Bascia, and A. Rodrigue, eds. *Teaching for Deep Understanding: Towards the Ontario Curriculum We Need*. Toronto, ON: Elementary Teachers' Federation of Ontario, 2004.

Leithwood, K., K. Seashore-Louis, S. Anderson, and K. Wahlstrom. *How Leadership Influences Student Learning: A Review of Research for the Learning from Leadership Project*. New York: The Wallace Foundation, 2004.

Little, J. "Norms of Collegiality and Experimentation: Workplace Conditions of School Success." *American Educational Research Journal* 19 (1982): 325–340.

Livingstone, D., D. Hart, and L. E. Davie. *Public Attitudes towards Education in Ontario 2002: The 14th OISE/UT survey*. Toronto, ON: Orbit Monograph, OISE/UT, 2003.

Locke, E. "The Nature and Causes of Job Satisfaction." In *Handbook of Industrial and Organizational Psychology,* edited by M. Dunnell, 1297–1349. Chicago, IL: Rand-McNally, 1976.

Loeb, S. "How Teachers' Choices Affect What a Dollar Can Buy: Wages and Quality in K-12 Schooling." In *The Teacher Workforce: Symposium Proceedings from the*

Education Finance Research Consortium. Albany, NY, 2001.

Loeb, S., L. Darling-Hammond, and J. Luczak. "How Teaching Conditions Predict Teacher Turnover in California Schools." *Peabody Journal of Education* 80, no. 3 (2005): 44–70.

Loucks-Horsley, S., P. Hewson, N. Love, and K. Stiles. *Designing Professional Development for Teachers of Science and Mathematics*. Thousand Oaks, CA: Corwin Press, 1998.

Louis, K., and S. Kruse. *Professionalism and Community: Perspectives on Reforming Urban Schools.* Newbury Park, CA: Corwin Press, 1995.

Lumsden, L. "Teacher Morale." *Eric Digest* (ED422601), No. 120 (1998).

Macdonald, D. "Teacher Attrition: A Review of Literature." *Teaching and Teacher Education* 15 (1999): 835–848.

Maslach, C., and S. E. Jackson. "A Scale Measure to Assess Experienced Burnout: The Maslach Burnout Inventory." *Journal of Occupational Behaviour* 2 (1981): 99–113.

Mascall, B. "Leaders Helping Teachers Helping Students: The Role of Transformational Leadership in Building Teacher Efficacy to Improve Student Achievement." PhD diss., University of Toronto, 2003.

Mathieu, J., and D. Zajac. "A Review and Meta-analysis of the Antecedents, Correlates and Consequences of Organizational Commitment." *Psychological Bulletin* 108, no. 2 (1990): 171–194.

Matsui, J. "ETFO Worklife Study: The Worklife Attitudes of Ontario Public Elementary Teachers." Toronto, ON: James Matsui Research, 2005.

Matsui, J., and Lang Research. "Bullying in the Workplace: A Survey of Ontario's Elementary and Secondary School Teachers and Education Workers." Toronto, ON: Elementary Teachers' Federation of Ontario (ETFO), Ontario English Catholic Teachers' Association (OECTA), Ontario Secondary School Teachers' Federation (OSSTF), 2005.

Menzies, T. "Teacher Commitment in Colleges of Applied Arts and Technology: Sources, Objects, Practices and Influences." PhD diss., University of Toronto, 1995.

Miskel, C., and R. Ogawa. "Work Motivation, Job Satisfaction and Climate." In *Handbook of Research on Educational Administration*, edited by N. Boyan, 279–304. New York: Longman, 1988.

Mont, D., and D. I. Rees. "The Influence of Classroom Characteristics on High School Teacher Turnover." *Economic Inquiry* 34 (1996): 152–167.

Moriarty, V., S. Edmonds, P. Blatchford, and C. Martin. "Teaching Young Children: Perceived Satisfaction and Stress." *Educational Research* 43, no. 1 (2001): 33–46.

Mowday, R., R. Steers, and L. Porter. "The Measurement of Organizational Commitment." *Journal of Vocational Behavior* 14 (1979): 224–247.

Naylor, C., and A. Schaefer. *Worklife of British Columbia Teachers: A Compilation of BCTF Research Reports on Working and Learning Conditions in 2001*.Vancouver, BC: British Columbia Teachers' Federation, 2003.

Naylor, C., A. Schaefer, and J. Malcolmson (eds.). *Worklife of British Columbia Teachers: A Compilation of BCTF Research Reports on Working and Learning Conditions in 2001*.Vancouver, BC: British Columbia Teachers' Federation, 2001.

Nguni, S., P. Sleegers, and E. Denessen. (in press). "Transformational Leadership Effects on Teachers' Job Satisfaction, Organizational Commitment and Organizational Citizenship Behavior in Primary Schools: The Tanzanian case." *School Effectiveness and School Improvement*.

Nir, A. "School Health and Its Relation to Teacher Commitment." *Planning and Changing* 33, nos. 1-2 (2002a): 106–126.

——. "The Impact of School-Based Management on School Health." *Journal of School Leadership* 12 (2002b): 368–396.

O'Day, J. "Incentives and Student Performance." In *Rewards and Reform: Creating Educational Incentives That Work*, edited by S. Fuhrman and J. O'Day. San Francisco, CA: Jossey-Bass, 1996.

Organ, D. "The Motivational Basis of Organizational Citizenship Behavior." *Research in Organizational Behavior 12* (1990): 43–72.

Ostroff, C. "The Relationship between Satisfaction, Attitudes and Performance: An Organizational Level Analysis." *Journal of Applied Psychology* 77 (1992): 963–974.

Parkay, F., G. Greenwood, S. Olejnik, and N. Proller. "A Study of the Relationship among Teacher Efficacy, Locus of Control, and Stress." *Journal of Research and Development in Education* 21, no. 4 (1988): 13–22.

Phillips, S. M. *Teacher Quality in Canada*. Kelowna, BC: Society for the Advancement of Excellence in Education, 2002.

Pogodzinski, J. M. *The Teacher Shortage: Causes and Recommendations for Change*. Sacramento, CA: Center for California Studies, California State University, 2000.

Poppleton, P., B. Gershunsky, and R. Pullin. "Changes in Administrative Control and Teacher Satisfaction in England and the USSR." *Comparative Education Review* 38, no. 3 (1994): 323–346.

Porter, L., R. Steers, R. Mowday, and P. Boulian. "Organizational Commitment, Job Satisfaction, and Turnover among Psychiatric Technicians." *Journal of Applied Psychology* 59, no. 5 (1974): 603–609.

Pounder, D. "Teacher Teams: Exploring the Job Characteristics and Work-Related Outcomes of Work Group Enhancement." *Educational Administration Quarterly* 35, no. 3 (1999): 317–348.

Rafferty, M. "The Effects of Teacher Morale on Teacher Turnover Rates." 2002. *http://www.shsu.edu/~edu_elc/journal/Issue2/Rafferty.pdf.*

Reyes, P., and M. Imber. "Teachers' Perceptions of the Fairness of Their Workload and Their Commitment, Job Satisfaction, and Morale: Implications for Teacher Evaluation." *Journal of Personnel Evaluation in Education* 5, no 3 (1992): 291–302.

Rhodes, C., A. Nevill, and J. Allan. "Valuing and Supporting Teachers: A Survey of Teacher Satisfaction, Dissatisfaction, Morale and Retention in an English Local Education Authority." *Research in Education* 71 (2004): 67–80.

Rosenblatt, Z. "Teachers' Multiple Roles and Skill Flexibility: Effects on Work Attitudes." *Educational Administration Quarterly* 37, no. 5 (2001): 684–708.

Rosenholtz, S. J. *Teachers' Workplace: The Social Organization of Schools*. New York: Longman, 1989.

Rosenholtz, S., and C. Simpson. "Workplace Conditions and the Rise and Fall of Teachers' Commitment." *Sociology of Education* 63, no. 4 (1990): 241–257.

Ross, J. A. "The Antecedents and Consequences of Teacher Efficacy." In *Advance in Research on Teaching* (Vol. 7), edited by J. Brophy, 49–74. Greenwich, CT: JAI Press, 1992.

——. "Strategies for Enhancing Teachers' Beliefs in Their Effectiveness: Research on a School Improvement Hypothesis." *Teachers College Record* 97 (1995): 227–251.

Ross, J., and P. Gray. "Transformational Leadership and Teachers' Commitment to Organizational Values: The Mediating Effects of Collective Teacher Efficacy." *School Effectiveness and School Improvement* (in press).

Ross, J., A. Hogaboam-Gray, and P. Gray. "Prior Student Achievement, Collaborative School Processes and Collective Teacher Efficacy." *Leadership and Policy in Schools* 3, no. 3 (2004): 163–188.

Ross, J., A. Hogaboam-Gray, and L. Hannay. "Effects of Teacher Efficacy on Computer Skills and Computer Cognitions of Canadian Students in Grades K-3." *Elementary School Journal* 102, no. 2 (2001): 141–162.

Ross, J., S. McKeiver, and A. Hogaboam-Gray. "Fluctuations in Teacher Efficacy during Implementation of Destreaming." *Canadian Journal of Education* 22 (1997): 283–296.

Rowan, B. "Standards as Incentives for Instructional Reform." In *Rewards and Reform: Creating Educational Incentives That Work*, edited by S. Fuhrman and J. O'Day. San Francisco, CA: Jossey-Bass, 1996.

Saskatchewan Teachers' Federation. *A Study of the Workload and Worklife of Saskatchewan Teachers: Principals*. Saskatoon, SK: Saskatchewan Teachers' Federation, 1998.

Sava, F. A. "Causes and Effects of Teacher Conflict-inducing Attitudes Towards Pupils: A Path Analysis Model." *Teaching and Teacher Education* 18 (2002): 1007–1021.

Scandura, R., and M. Lankau. "Relationships of Gender, Family Responsibility and Flexible Work Hours to Organizational Commitment and Job Satisfaction." *Journal of Organizational Behavior* 18 (1997): 377–391.

Schlansker, B. "A Principal's Guide to Teacher Stress." *Principal* 66, no. 5 (1987): 32–34.

Schnake, M. "Organizational Citizenship: A Review, Proposed Model, and Research Agenda." *Human Relations* 44, no. 7 (1991): 735–759.

Sergiovanni, T. "Factors Which Affect Satisfaction and Dissatisfaction of Teachers." *Journal of Educational Administration* 5, no. 1 (1967): 66–81.

Seyfarth, J. T., and W. A. Bost. "Teacher Turnover and the Quality of Worklife in Schools: An Empirical Study." *Journal of Research and Development in Education* 20, no. 1 (1986): 1–6.

Shen, J. "Teacher Retention and Attrition from Public Schools: Evidence from SASS91." *Journal of Educational Research* 91, no. 2 (1997): 33–39.

Shulman, L. S. "Knowledge and Teaching: Foundations of the New Reform." *Harvard Educational Review* 51, no. 1 (1987): 1–22.

Stockard, J., and M. Lehman. "Influences on the Satisfaction and Retention of 1st-Year Teachers: The Importance of Effective School Management." *Educational Administration Quarterly* 40, no. 5 (2004): 742–771.

Tatar, M., and G. Horenczyk. "Diversity-Related Burnout among Teachers." *Teaching and Teacher Education* 19 (2003): 397–408.

Theobald, N. D. "An Examination of the Influence of Personal, Professional and School District Characteristics on Public School Teacher Retention." *Economics of Education Review* 9, no. 3 (1990): 241–250.

Tschannen-Moran, M., and M. Barr. "Fostering Student Achievement: The Relationship between Collective Teacher Efficacy and Student Achievement." *Leadership and Policy in Schools* 3 (2004): 187–207.

Tschannen-Moran, M., A. Woolfolk Hoy, and W. Hoy. "Teacher Efficacy: Its Meaning and Measure." *Review of Educational Research* 68, no. 2 (1998): 202–248.

Tschannen-Moran, M., and A. Woolfolk Hoy. "Teacher Efficacy: Capturing an Elusive Construct." *Teaching and Teacher Education* 17 (2001): 783–805.

Tsui, K., T., and Y. C. Cheng. "School Organizational Health and Teacher Commitment: A Contingency Study with Multi-level Analysis." *Educational Research and Evaluation* 5, no. 3 (1999): 249–268.

Tye, B. B., and L. O'Brien. "Why Are Experienced Teachers Leaving the Profession?" *Phi Delta Kappan* 84, no. 1 (2002): 24–32.

Vogrinetz, S. L. *Alberta Teachers, a Workload Study*. Calgary, AB: Alberta Teachers' Association, 1997.

Walsh, K. *Teacher Certification Reconsidered: Stumbling for Quality*. Baltimore, MA: The ABELL Foundation, 2001.

Warren, L., and B. Payne. "Impact of Middle Grades' Organization on Teacher Efficacy and Environmental Perceptions." *Journal of Educational Research* 90, no. 5 (1997): 301–308.

Weiss, E. "Perceived Workplace Conditions and First-Year Teachers' Morale, Career Choice Commitment and Planned Retention: A Secondary Analysis." *Teacher and Teacher Education* 15 (1999): 861–879.

Williams, L., and J. Hazer. "Antecedents and Consequences of Satisfaction and Commitment in Turnover Models: A Reanalysis Using Latent Variable Structural Equation Methods." *Journal of Applied Psychology* 71, no. 2 (1986): 219–231.

Wilson, S. M., R. E. Floden, and J. Ferrini-Mundy. *Teacher Preparation Research: Current Knowledge, Gaps, and Recommendations. Document R-01-3*. Seattle, WA: Center for the Study of Teaching and Policy, 2001.

Wright, M. D. "Retaining Teachers in Technology Education: Probable Causes, Possible Solutions." *Journal of Technology Education* 3, no. 1 (1991).

Wright, T., and D. Bonett. "The Moderating Effects of Employee Tenure on the Relation between Organizational Commitment and Job Performance: A Meta-analysis." *Journal of Applied Psychology* 87, no. 6 (2002): 1183–1190.

Zigarelli, M. "An Empirical Test of Conclusions from Effective Schools Research." *Journal of Educational Research* 90, no. 2 (1996): 103–110.

INDEX