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## Teachers' Work in the Global Culture of Performance

*Increasingly teachers find themselves working in the rarefied atmosphere of high-stakes testing. In Alberta, as in the rest of the industrialized world, the impulse to increase the monitoring and surveillance of student performance grows unabated. What are the impacts on teachers' work amid the growth of this culture of performance? Although internationally there are many debates around the issue of high-stakes testing, relatively little has been written about the lived experiences of teachers in this area. Drawing on a general review of the literature on teachers' classroom responses to high-stakes testing, this article argues that it is time to develop a framework for understanding the particular localized ways that teachers respond to the global culture of performance.*

*Le contexte dans lequel œuvrent les enseignants devient de plus de plus un monde à part caractérisé par des évaluations à enjeu considérable. En Alberta, comme partout ailleurs dans le monde industrialisé, le mouvement en faveur d'augmenter le suivi et la surveillance des étudiants se poursuit sans relâche. Quel est l'impact de la montée de ce culte voué à la performance, sur le travail des enseignants? Alors que l'on discute beaucoup, à l'échelle internationale, de cette question d'évaluations à enjeu considérable, on a fait couler peu d'encre sur les expériences des enseignants dans ce domaine. En prenant comme base les recherches publiées sur les réactions des enseignants aux évaluations à enjeu considérable, les auteurs proposent qu'il est temps de développer un cadre qui permettrait de comprendre les diverses façons dont les enseignants réagissent à la culture globale de la performance.*

Teachers are increasingly caught in between the New Right's contradictory demand for greater accountability through high-stakes testing and decreased expenditures on public education. The impulse to measure externally what schools do has led to the development of a "testing culture" and a test development industry that increasingly pervades classroom life (Ohanian, 1999). Darling-Hammond (1997) characterizes the current contexts for teachers' work:

Standards must be higher and more exacting, outcomes must be measurable and comparable, accountability must be hard-edged and punitive, and sanctions must be applied almost everywhere—to students and teachers, especially—although not to those whose decisions determine the possibilities for learning in schools. (p. 5)

A study by the Canadian Teachers' Federation (1999) highlights the inequities of high-stakes testing by enumerating the problems it creates at the class-

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room level. These effects include, among others, "squeezing out" of nontested subjects, discriminatory streaming and tracking of minorities. The report is one manifestation of a growing national recognition that perhaps we have become too accustomed to the growth of the culture of performance that permeates our schools.

Internationally, teachers' work is being transformed by the "new ruthless economy of globalization" (Head, 1996, p. 42). In Canada, Robertson (1998) describes how globalization and corporatization are undermining the goal of maintaining equal access to public education for all students. More important, these challenges coexist in a societal breakdown of faith in the traditional authority of public institutions and professional expertise (Usher & Edwards, 1994). Gee and Lankshear (1996) describe the paradox teachers face. The buzzwords *participation*, *collaboration*, and *flattened hierarchies* serve to mask the profound cultural shift of workers who labor in "fast capitalism." Under fast capitalism work is organized around three activities: tightly linking resources to outputs; sophisticated and precise surveillance; and JIT delivery (just-in-time delivery: getting the customer what is wanted when it is wanted). The development of hard-nosed performance indicators are symptomatic of a larger public policy drive toward what one researcher has called the "new Evaluative State" (Neave, 1989).

#### *The Global Culture of Performance and the Alberta Context*

What follows is a discussion of the policy contexts that have given form to the culture of performance and an exploration of the current literature on teachers' reactions to high-stakes testing. The literature on teacher responses to high-stakes testing suggests that it is time for researchers in Alberta to direct their efforts toward a localized understanding of how teachers attempt to make meaning for themselves in the culture of performance. At the conclusion of this article we identify key questions that will be used in a follow-up study with focus groups of teachers to ascertain how high-stakes testing has had an impact on their practices and their school's climate. First, we need to review the broad literature on testing effects and how this literature might inform the development of these questions.

Runte (1998) describes the subtle impact that the introduction of centralized examinations has had in Alberta. His research makes a key contribution in understanding the particular contexts of the culture of performance in Alberta. With the introduction of the Provincial Achievement Tests in core subjects in grades 3, 6, and 9, as well as with the grade 12 Diploma Examination program, teachers have become subject to what Runte calls "ideological proletarianization" (p. 179). Although allowing teachers considerable input in the technical design of the tests, the examinations have served to place teachers under continued monitoring and surveillance by administrators, superintendents, and parents who equate "public accountability" of what teachers do with performance on the provincial examinations. Although the personnel in the test development technical branch attempt to distance themselves from the misuse of test scores, the flagrant violation of principles of fair assessment continues. The most recent outrage for both teachers and test developers is the publication of rankings of schools based on raw averages achieved by schools. These so-called school-ranking reports are touted by neo-conservative institu-

tions such as the Fraser Institute as useful ways to compare the performance of schools. Of course, these rankings ignore socioeconomic and linguistic variables that differentiate student populations. One study in Alberta found that social class explained 45% of the variation in achievement on provincial tests, whereas school factors accounted for 3-6% of test score variation (Lytton & Pyryt, 1997). Although teaching does matter, we cannot forget the complex variables that are at play in student learning. For example, Payne and Biddle (1999) have illustrated how family income is the single greatest determiner of performance in mathematics. (Here in Alberta, where completion of certain "higher-level" mathematics programs continues to be used as an entrance requirement for university, important equity issues can also be raised.)

Despite the media's lack of interest in the complexities that shape student performance on high-stakes tests, the publication of school rankings continues. Yet in Alberta, as in the rest of North America, teachers continue to struggle with declining resources and increasing demands placed on their time. What are the everyday impacts of the growth of this culture of performance and assessment at the classroom level? How are schools and teachers responding to the increased surveillance and monitoring of their work?

In her review of educational reform in the 10 provinces, Mawhinney (1998) argues that the single overriding concern of politicians is development and refinement of improved technologies of assessment. Certainly what is currently driving educational reform in North America and Europe is the apparent crisis in accountability (Macpherson, 1995).

Public examinations have often been used as instruments and targets of control in the school system. Their relationship with the curriculum, with teacher teaching, with student learning, and to individual opportunities is of vital importance in most societies. Consequently, public examinations are being promoted as a means of ensuring that educational standards are maintained or improved. A belief that the function of assessment can leverage educational change has often led to top-down educational reform strategies by introducing centrally controlled assessment practices into schools. In Canada a consortium of provincial ministers of education recently instituted a project of national achievement testing in the areas of reading, language arts, and science (Council of Ministers, 1994). British Columbia, Alberta, Saskatchewan, Quebec, and Newfoundland require students to pass centrally set school-leaving examinations as a condition for school graduation. As large-scale assessment practices increase, districts and schools scramble to provide more comprehensive programs and more coaching of testing throughout all grades (Calder, 1990, 1997; Wideen, O'Shea, & Pye, 1997). A special issue of the *Canadian Journal of Education* in 1995 was devoted to a discussion of accountability in education in Canada. McEwen (1995a, see also 1995b), when talking about educational accountability in Alberta, points out that "what is assessed becomes what is valued, which becomes what is taught" (p. 42).

Studies of the impact of large-scale testing programs on teaching and learning can be traced as far back as 1877. Latham (1877), characterized external examination systems as an "encroaching power" (p. 1) that was influencing education, narrowing the range of learning by forcing students to prepare by studying with crammers and in cramming schools. It has been asserted that the

encroaching power also permitted external bodies—a university or a government agency—to exert control over the internal operations of educational systems that were becoming increasingly complex (Spolsky, 1994).

Numerous studies have demonstrated that high-stakes testing programs such as those that determine future academic and employment opportunities influence teaching and learning in significant ways (Borko, Flory, & Cumbo, 1994; Kellaghan & Greaney, 1992; Kellaghan, Madaus, & Airasian, 1982; Macintosh, 1986):

- schools (organization, practice, and achievement; accountability pressure);
- teachers (their attitudes and responses to standardized tests, teachers' attention to testing in instructional planning and delivery, teaching contents, time spent on test preparation, teachers' sense of professional pride, and teachers' general attitudes about the fairness and utility of testing, etc.);
- students (their reactions, self-concepts, and self-assessment, or student learning outcome);
- parents (their familiarity with the changes in evaluation of their children's school progress and their knowledge about and attitude toward standardized testing).

Smith, Edelsky, Draper, Rottenberg, and Cherland (1990) found that the pressure to improve students' test scores caused some teachers to neglect teaching materials that the external test did not include. Herman and Golan (1991) found that teachers adjusted the sequence of their curriculum based on what was included on the test. Mathison (1987) discovered that teachers altered their instructional materials to resemble the format of mandated tests. Stodolsky (1988) found that the existence of mandated testing led teachers to neglect team-teaching approaches. Madaus (1988) noted that teachers taught to the test when they believed important decisions such as student promotion would be based on test scores. Romberg, Zarinnia, and Williams (1989) found that as a result of the emphasis on test results, teachers increased attention to paper-and-pencil computation, yet reduced attention to project work. They concluded "the greater the consequences attached to the test, the more likely it would be to have an impact on teaching" (p. 4).

Madaus (1988) pointed out that in every setting where high-stakes testing operates, a storehouse of past examinations builds up, which eventually de facto defines the curriculum taught. Some teachers argue that if the skills for success on tests are identifiable and if the tests truly measure them, then coaching is perfectly acceptable. However, according to Madaus, this ignores a fundamental fact of life: when the teachers' professional worth is estimated in terms of examination success, teachers are invariably deskilling students by reducing learning to the level of developing test-taking strategies (see also Macintosh, 1986; Runte, 1998; Wideen et al., 1997). Madaus also pointed out that if the examination is perceived as important enough, a commercial industry tends to develop around preparing students for the tests or providing them with supplemental supports. In Alberta this certainly is evident with the provincial Diploma Examination program, where private companies have emerged that offer such supports. Of course, this phenomenon raises equity

issues for students who may not have access to these supports or who cannot afford them.

Noble and Smith (1994) argued that "teaching test-taking skills and drilling on multiple-choice worksheets is likely to boost the scores but unlikely to promote general understanding" (p. 6). It is also reported in Forbes (1973) that students are forced to cram for examinations rather than prepare for a broad curriculum.

A number of studies (Cannell, 1987; Linn, Grave, & Sanders, 1989; Shepard, 1993) raise questions about whether improvements in test score performance actually signal learning. Other studies point to standardized tests' narrowness of content, their lack of match with curricula and instruction, their neglect of higher-order thinking skills, and the limited relevance and meaningfulness of their multiple-choice formats (Baker, 1989; Herman, 1989, 1992; Shepard, 1993; Wideen et al., 1997). According to these and other researchers, rather than exerting a positive influence on student learning, testing may trivialize the learning and instructional process, distort curricula, and usurp valuable instructional time (Bracey, 1989; Dorr-Bremme & Herman, 1986; Romberg et al., 1989, Smith et al., 1990; Stake, 1988).

In British Columbia, Anderson, Muir, Bateson, Blackmore, and Rogers (1990) studied the impact of reintroducing final examinations at grade 12. Teachers reported a narrowing of the curriculum to the topics the examination was most likely to include, and that students adopted more of a memorization approach, with reduced emphasis on critical thinking. The grade 12 examinations have affected students in lower grades through increased schoolwide tests, increased emphasis on test-taking skills, and increased attention to subject matter associated with the examination. In another study (Wideen et al., 1997), reported that grade 12 teachers believed that they lost much of their discretion in curriculum decision-making and much of their professional autonomy. When teachers feel they are circumscribed and controlled by the examinations and their students' focus is on what will be tested, teaching becomes limited to the testable aspects of the discipline (see also Calder, 1990, 1997). Other researchers who studied a group of grade 9 mathematics teachers found that some teachers feel that they can thrive with external testing programs in place (Simmt et al., 1999). Clearly teachers are not universally opposed to the presence of external tests in their classrooms. Yet it seems clear that the growing use of external educational assessments is linked to monitoring and controlling what teachers do in the classroom (Linn, 1992). Petrie (1987) pointed out that it would not be too much of an exaggeration to say that evaluation and testing have become the engine for implementing educational policy.

#### *Living the "Divided Life" Amid the Culture of Performance*

Teachers are not alone in their growing sense of frustration with the conditions of public schooling where the rhetoric of calling for raising standards is offered with declining funding for schools. A recent survey suggests that a growing number of Ontario school board trustees are refusing to run for office again, citing increased time pressures and school board amalgamation as factors that are making their jobs difficult (Arnott, 1999). With their roles devalued by increased provincial control, many trustees ask, "What is the point?"

The situation in Ontario is especially significant given the call by the Harris government for tighter controls on the teaching profession and the need to define in precise terms what the “standards of practice” are for effective teaching. The appointment of a Manager of Standards of Practice and Education for the Ontario College of Teachers signals an effort to button down the meaning of “good” teaching. Martin (1999) argues that this attempt to remove tensions and uncertainty from teaching practice is a first step toward the diminishment of teaching as a profession. Increasingly teachers live in two worlds: one full of the strict realism of externally measured learning outcomes and test results and the other full of the fecundity of the daily life of the classroom. Eisner (1999) clearly puts the case: school improvement will not come about through a focus on narrowly defined outcomes and competitive rankings of schools, but from a recognition that our lives as students and teachers are enriched by “the quality of experiences afforded by meaningful work” (p. 660).

Teachers continue to try to make meaning for themselves and their students in the face of the culture of performance. Palmer (1998) describes the paradox of many in the helping professions as “living a divided life” (p. 167). Although Palmer resists singling out any one source of this malaise, he does evocatively describe the increasing remoteness and alienation that teachers feel: a growing split created by a sense of dislocation. It is in the sense of living one thing and believing another that much of contemporary teaching is about. Consider these comments from a first-year teacher:

I’m a new teacher with no continuing contract. The other day I did it to myself. Twenty-seven students in a grade 3 room and five of them with severe emotional problems and learning difficulties. No teacher aide. The kids are calling out, interrupting and half of the time I don’t know what I am doing. For most of the kids, I am doing a good job, I think. But for those five other students, I’m lost. I know the district really supports integration so when the principal asked me how it was going, I smiled and said, “Good” ... I really want to keep my job, I love teaching. (Interview)

Another teacher writes:

No more ... teaching diploma exam courses. The other day a parent complained that I didn’t get her daughter through the grade 12 diploma exam okay. I didn’t go into teaching to get kids through exams. Early retirement—six more years to go. (Interview)

One teacher caught; the other choosing to leave the profession. To live, as Palmer writes, outside of oneself is becoming a more common condition of teaching. This condition is not about teachers who live with some naïve, romanticized image of the past, but about the emotional gridlock and increasing energy expended on arriving at someone else’s destination. Sizer (1998) evocatively describes the contemporary high school experience as one of being in an airport: students hurriedly shuttling from classroom to classroom to classroom lugging their backpacks. The cruellest cut of all, according to Sizer, is that teachers and their students are not only expected to arrive on time, but are expected to enjoy the trip! As teachers, to admit to our complicity in taking children to places we ourselves would rather not go is the beginning of recognizing the malaise that public schoolteachers are experiencing. As well as



living other people's dreams (i.e., the New Right agenda for schools), teachers are confronted with doubts about their ability to meet the needs of the increasingly complex classrooms they face.

I've been at this for eight years and I still live wondering one day will they ever find out ... find out that half the time I do not know what the hell I am doing. I love the kids but the new courses every semester and the big classes mean that I am in crisis management mode most of the time. (Interview)

Tompkins (1991) writes in "Pedagogy of the Distressed" about her anxieties in teaching. Tompkins expresses a deep fear that one day she will be discovered for what she is—a fraud. She writes that her early anxieties as a teacher were not about helping students learn but with

a) showing the students how smart I was; b) showing them how knowledgeable I was; and c) showing them how well prepared I was for class. I had been putting on a performance whose true goal was not to help the students learn but to act in such a way that they would have a good opinion of me ... how did it come to be that our main goal as academicians turned out to be performance. (pp. 16-17)

Tompkins answers her own question: "Fear for being shown up for what you are: a fraud, stupid, ignorant, a clod, a dolt, a sap, a weakling, someone who can't cut the mustard" (p. 17).

What she sees on the horizon does not bode well for schools, however. If the last decade is any indication, we can expect increasing pressures to develop further evaluation measures at the provincial and national levels. Rather than addressing the causes of low achievement, increasingly governments in Canada see funding testing as a highly visible way to be seen to be doing something about education. Driving these expenditures of funds on assessment activities is an impulse to control behavior without really attending to the causes of that behavior. The mechanisms put in place to monitor school performance are part of a larger policy shift in Canadian education to control outcomes centrally without directly micro-managing educational practice (Broadfoot, 1998).

This approach is commonly framed as "steering from the back" by many school administrators, who increasingly find themselves accountable for outcomes but unable to control inputs. The movement toward site-based management might be construed in this light. The equation is simple, Mawhinney (1998) argues, as strong centralized control over results grows stronger and the autonomy to access resources to achieve these results diminishes, the end result is obvious. Something has to give. In her recent review of assessment practices and policies in Canadian schools, Mawhinney argues that there is more need for research on the fundamental pressures and impacts of accountability reforms on schools than there is for more external testing.

Teachers feel they are "in over their heads" (Kegan, 1994) and research across North America continues to link poor working conditions with increasing levels of burnout (Abel & Sewell, 1999; Friedman, 1991, 1995; Jenkins & Calhoun, 1991). In Alberta one of the authors of the report *Trying to Teach* (1993) concluded, "teachers love their jobs, the kids and teaching—they want to be left alone to do what they were trained to do" (personal communication).

Since the publication of *Trying to Teach*, in Alberta relatively little has been done to document the work of teachers amid the culture of performance. Recently in the United States, a national coalition of educators has made a real effort to document some of the fallout from the testing explosion (National Center for Fair and Open Testing: [www.fairetest.org](http://www.fairetest.org)). As well as documenting some of the more flagrant abuses of testing and test results, the center is developing a series of alternatives to the growth of high-stakes testing. Of course, Alberta has seen its share of work in the area of developing alternative assessment strategies. The Alberta Assessment Consortium's work is well known to teachers and is providing a valuable service that offers solid assessment strategies that offer powerful alternatives to externally mandated high-stakes testing.

As Ohanian (1999) argues, the 1990s saw unprecedented cuts to education across North America, paralleled by growing calls for accountability and measurement. As corporate downsizing took hold in the business world, the public became increasingly enamored with the one-two knockout punch of neo-conservative reform: improving outcomes (read *test performance*) combined with drastic cuts to education. Since the cuts to education in the early 1990s, a cultural amnesia has set in where "learning" has become equated with performance on tests and where leadership at the school level is equated with milking "continuous improvement" in the face of deteriorating conditions in classrooms.

In the next year we will undertake focus group discussions with teachers across the province related to their experiences in the current testing culture of Alberta schools.

Teachers will be invited to address these questions:

1. What are the impacts of Provincial Achievement Tests and the Diploma Examinations in terms of: (a) your teaching? (b) your students' learning? (c) your school administration and school council? (d) your students' parents?
2. How do you as a teacher feel that these tests are *limiting or enabling* student learning?
3. If there are *limiting factors* on student learning related to these tests, what do you do to deal with these? If there are *enabling factors*, what can you do to maximize these effects?

Only in particular localized educational contexts can we begin to understand the complex ways that high-stakes testing affect the classroom. The efforts to help teachers mediate the pressures that external tests have introduced into the classroom pale in comparison with the expenditures devoted to developing and refining these tests. One need simply compare the incredible growth of testing activity that has unfolded since the mid-1980s against researchers' efforts to develop our understanding of how these tests have affected the classroom (Mawhinney, 1998). High-stakes testing in the global culture of performance tries to tell a particular sort of story about education. We hope our research and conversations with teachers in Alberta will tell other, richer stories.

#### References

- Abel, M.H., & Sewell, J. (1999). Stress and burnout in rural and urban secondary school teachers. *Journal of Educational Research*, 92, 287-293.



- Anderson, J.O., Muir, W., Bateson, D.J., Blackmore, & D., Rogers, W.T. (1990). *The impact of provincial examinations on education in British Columbia: General report*. Victoria, BC: British Columbia Ministry of Education.
- Arnott, K. (1999, July). Trustees speak out. *Education Today*, pp. 20-21, 33.
- Baker, E.L. (1989). *Can we fairly measure the quality of education?* (Center for Study of Evaluation (CSE) technical report 290). Los Angeles, CA: Center for Study of Evaluation (CSE).
- Borko, H., Flory, M., & Cumbo, K. (1994). *Teachers' ideas and practices about assessment and instruction: A case study of the effects of alternative assessments in instruction, student learning and accountability practices* (CSE technical report 366). Boulder, CO: University of Colorado at Boulder, CRESST.
- Bracey, G.W. (1989). The \$150 million redundancy. *Phi Delta Kappan*, 70, 698-702.
- Broadfoot, P.M. (1998). *Education, assessment and society*. Milton Keynes, UK: Open University Press.
- Calder, P. (1990). *The impact of diploma examinations on the teaching-learning process*. Edmonton, AB: Alberta Teachers' Association.
- Calder, P. (1997). *The impact of Alberta achievement tests on the teaching-learning process*. Edmonton, AB: Alberta Teachers' Association.
- Canadian Teachers' Federation. (1999). *Standardized testing and high stakes decisions*. Ottawa: Author.
- Cannell, J.J. (1987). Nationally normed elementary achievement testing in America's public schools: How all 50 states are above the national average. *Educational Measurement: Issues and Practice*, 7(4), 12-15.
- Council of Ministers of Education, Canada. (1994). *School achievement indicators program*. Toronto, ON: Author.
- Darling-Hammond, L. (1997). Toward what end? The evaluation of student learning for the improvement of teaching. In J. Millman (Ed.), *Grading teachers, grading schools* (p. 5). Thousand Oaks, CA: Corwin Press.
- Dorr-Bremme, D., & Herman, J. (1986). Assessing student achievement: A profile of classroom practices. *CSE monograph series in evaluation*, 11. Los Angeles, CA: CSE.
- Eisner, E. (1999). The uses of performance assessment. *Phi Delta Kappan*, 80, 658-660.
- Forbes, D. (1973). Selling English short. *English Language Teaching Journal*, 27, 132-137.
- Friedman, I. (1991). High- and low-burnout schools: School culture and aspects of teacher burnout. *Journal of Educational Research*, 84, 325-333.
- Friedman, I. (1995). Student behavior patterns contributing to teacher burnout. *Journal of Educational Research*, 88, 281-289.
- Gee, J.P., & Lankshear, C. (1996). *The new work order: Behind the language of new capitalism*. Sydney, NS: Westview Press.
- Head, S. (1996). The new, ruthless economy. *New York Review of Books*, 29, 47-52.
- Herman, J.L. (1989). *Priorities of educational testing and evaluation: The testimony of the CRESST National Faculty* (CSE technical report 304). Los Angeles, CA: CRESST.
- Herman, J.L. (1992). *Accountability and alternative assessment: Research and development issues* (CSE technical report 384). Los Angeles, CA: CRESST.
- Herman, J.L., & Golan, S. (1991). *Effects of standardized testing on teachers and learning—Another look* (CSE technical report 334). Los Angeles, CA: CRESST.
- Jenkins, S., & Calhoun, J.F. (1991). Teacher stress: Issues and intervention. *Psychology in the Schools*, 28, 60-70.
- Kegan, R. (1994). *In over our heads*. Cambridge, MA: Harvard University Press.
- Kellaghan, T., & Greaney, V. (1992). *Using examinations to improve education: A study of fourteen African countries*. Washington, DC: World Bank.
- Kellaghan, T., Madaus, G.F., & Airasian, P.W. (1982). *The effects of standardized testing*. London: Kluwen, Nijhof.
- Latham, H. (1877). *On the action of examinations considered as a means of selection*. Cambridge, MA: Deighton, Bell.
- Linn, R.L. (1992). *Educational assessment: Expanded expectations and challenges* (CSE technical report 351). Boulder, CO: University of Colorado at Boulder, CRESST.
- Linn, R.L., Grave, M.E., & Sanders, N.M. (1989). *Comparing state and district test results to national norms: Interpretations of scoring "above the national average"* (Technical report). Boulder, CO: CRESST.
- Lytton, H., & Pyryt, M. (1997). *Why do schools differ in achievement test results?* Calgary, AB: Calgary Board of Education.

- Macintosh, H.G. (1986). The prospects for public examinations in England and Wales. In D.L. Nuttall (Ed.), *Assessing educational achievement* (pp. 19-34). London: Falmer Press.
- Macpherson, R.J.S. (1995). Accountability research in education: Current developments. *International Journal of Educational Research*, 23, 561-567.
- Madaus, G.F. (1988). The influence of testing on the curriculum. In L.N. Tanner (Ed.), *Critical issues in curriculum: Eighty-seventh yearbook of the National Society for the Study of Education* (pp. 83-121). Chicago, IL: University of Chicago Press.
- Martin, A.K. (1999). *Towards an epistemology of professionalism: Perturbations, metaphors, and politics*. Paper presented to the annual meeting of the Canadian Society for Studies in Education, Sherbrooke.
- Mathison, S.M. (1987). *The perceived effects of standardized testing on teaching and curriculum*. Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign.
- Mawhinney, H.B. (1998). Patterns of social control in assessment practices in Canadian frameworks for accountability in education. *Educational Policy*, 12, 98-109.
- McEwen, N. (1995a). Educational accountability in Alberta. *Canadian Journal of Education*, 20, 27-44.
- McEwen, N. (1995b). Introducing accountability in education in Canada. *Canadian Journal of Education*, 20, 1-17.
- Neave, G. (1989). On the cultivation of quality, efficiency and enterprise: An overview of recent trends in high school education in Western Europe 1986-1988. *European Journal of Education*, 20(1), 1-7.
- Noble, A.J., & Smith, M.L. (1994). *Old and new beliefs about measurement-driven reform: "The more things change, the more they stay the same"* (CSE technical report 373). Arizona State University: CSE.
- Ohanian, S. (1999). *One size fits few*. Portsmouth, NH: Heinemann.
- Palmer, P. (1998). *The courage to teach*. San Francisco, CA: Jossey-Bass.
- Payne, K., & Biddle, B. (1999). Poor school funding, child poverty and mathematics achievement. *Educational Researcher*, 28(6), 4-13.
- Petrie, H.G. (1987). Introduction to evaluation and testing. *Educational Policy*, 1, 175-180.
- Robertson, H.-J. (1998). *No more teachers, no more books*. Toronto, ON: McClelland & Stewart.
- Romberg, T.A., Zarinnia, A., & Williams, S.R. (1989). *The Influence of mandated testing on mathematics instruction: Grade 8 teachers' perceptions* (monograph). Madison, WI: University of Wisconsin, National Center for Research in Mathematical Science Education.
- Runte, R. (1998). The impact of centralized examinations on teacher professionalism. *Canadian Journal of Education*, 23, 166-181.
- Shepard, L.A. (1993). The place of testing reform in educational reform: A reply to Cizek. *Educational Researcher*, 22(4), 10-14.
- Simmt, E. et al. (1999). *The teaching practices project: Research into teaching practices in Alberta schools that have had a history of students exceeding expectations on grade 9 provincial achievement tests in mathematics*. Edmonton, AB: Alberta Education.
- Sizer, T. (1998, September 10). School reform in the United States. IDEAS Series. CBC Radio.
- Smith, M.L., Edelsky, C., Draper, K., Rottenberg, C., & Cherland, M. (1990). *The role of testing in elementary schools* (CSE technical report 321). Los Angeles, CA: University of California, CSE.
- Spolsky, B. (1994). The examination of classroom backwash cycle: Some historical cases. In D. Nunan, V. Berry, & R. Berry (Eds.), *Bringing about change in language education* (pp. 55-66). Hong Kong: University of Hong Kong, Department of Curriculum Studies.
- Stake, R.E. (1988). *The effect of reforms in assessment in the USA*. Paper presented at the annual meeting of the British Educational Association at the University of East Anglia.
- Stodolsky, H. (1988). *The subject matters: Classroom activity in math and social studies*. Chicago, IL: University of Chicago Press.
- Tompkins, J. (1991). Pedagogy of the distressed. *College English*, 52(6), 16-17.
- Trying to teach*. (1993). Edmonton, AB: Alberta Teachers' Association.
- Usher, R., & Edwards, R. (1994). *Postmodernism and education*. New York: Routledge.
- Wideen, M.F., O'Shea, T., & Pye, I. (1997). High-stakes testing and the teaching of science. *Canadian Journal of Education*, 22, 428-444.