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## **Transforming Knowledge: Blurring the Boundaries Between Research, Policy, and Practice<sup>1</sup>**

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*This paper explores ways in which the boundaries between educational research, policy, and practice are being—and can further be—blurred in the postmodern age. First, it describes two paradigms of knowledge and how knowledge is used or generated by practitioners: knowledge utilization and teachers' self-generated knowledge. The distinctions between these two positions, it is argued, are much less clear cut than is commonly claimed. Indeed, I suggest, in a complex, diverse, and rapidly changing postmodern world, the boundaries between university discourse and school-level discourse about education should become more open still. The remainder of the paper exemplifies and analyzes how these different forms of knowledge and discourse in education can be transformed in productive ways. Four practical examples of such transformation drawn from my own research and development work are described. Finally, 10 principles for reinventing the nature of and relationships between knowledge creation and knowledge utilization in education are outlined.*

- What use is university-based research knowledge to teachers? How can it be made more useful?
- What use is the knowledge of individual teachers, to other educators as well as themselves? How can it be made useful?

For more than 20 years, these two sets of questions have been at the heart of our efforts to understand and improve the relationship between teaching, educational research, and educational change. The first question characterizes the traditional field of knowledge utilization. It is concerned with how expert research knowledge about teaching and learning, developed in universities, can be communicated to teachers in ways that will enable and encourage them to make use of it. The second question is prompted by the concern that teachers, too, have valid professional knowledge and that ways need to be found of legitimizing it, codifying it, and making it public. This second question preoccupies and underpins the work of researchers in the fields of teachers' personal knowledge, practical knowledge, reflective practice, and teacher research.

The differences between the fields of knowledge utilization and of teachers' practical knowledge are partly epistemological; they amount to different conceptions of the nature of knowledge and what is professionally worthwhile about it. The differences are also political. The two fields make different claims about who own, define, and act as gatekeepers of what is to count as professionally worthwhile knowledge. They compete over who has the status and the right to define such knowledge.

This paper reviews the claims and contributions of these two broadly constituted fields concerned with teachers' professional knowledge. It also analyzes the implications of these two positions for understanding educational change and how to bring it about. The distinctions between the two positions, I shall argue, are much less clear cut than is often claimed. Indeed, I shall suggest, in a complex, diverse, and rapidly changing postmodern world, the borders between university discourse and school-level discourse about teachers' knowledge in particular and education more generally should become more open still.<sup>2</sup> Consciously creating knowl-

edge together among communities of teachers, administrators, and university researchers, I shall argue, can open up better possibilities for improving teaching, creating and disseminating really useful research, and bringing about educational change.

In the remainder of the paper, I exemplify and analyze how the boundaries that currently divide the knowledge and discourse of universities and the knowledge and discourse of schools and school systems can be traversed and transformed in productive ways. I do this by describing four research initiatives in which I am currently or have recently been involved. Then I draw some implications from these examples of border crossings between university knowledge and school-level knowledge for reinventing knowledge development and knowledge use in the postmodern age.

### **Paradigms of Useful Knowledge**

Following Wideen, Mayer-Smith, and Moon (in press), Lytle and Cochran-Smith (1992), and others, there appear to be two broad paradigms of knowledge and its use to teachers: knowledge utilization and practical, personal, or craft knowledge.

#### *1. Knowledge Utilization*

Work on knowledge utilization in education came to prominence in the 1970s and 1980s. It emerged at a time of intense interest in developing educational innovations and curriculum packages, which were then perceived as not being adopted or implemented properly by teachers (Love, 1975). The university-based producers of knowledge, it seemed, were failing to reach, influence, or secure the commitment of classroom teachers. Research on knowledge utilization sought to establish how university-based research and development and its means of dissemination could be improved to ensure that teachers made more extensive use of it. Importantly, "knowledge utilization" literature was also among the first to address what changes needed to be made in the conditions of teaching so as to allow and encourage teachers to be more receptive to externally produced knowledge.

Epistemologically, the knowledge at stake here was usually knowledge of a particular sort. It was propositional in the sense that it offered

generalized claims, statements, or prescriptions of a rational kind (Fenstermacher, 1994). These propositional forms of language, reasoning, argumentation, and proof distinguished and detached university-based research knowledge from the everyday, common sense knowledge of teachers in schools. University-based knowledge was not tailored to any one school or classroom, but transcended the many different kinds of contexts in which teachers taught. It was written in research reports, curriculum texts, and teachers' guides. This written knowledge was also public knowledge, available to all who wished to inspect it.

Politically and institutionally, the knowledge that was the subject of knowledge utilization research emanated primarily from universities or from government-sponsored research units and departments. It was the property and prerogative of accredited research experts. They could define public and professional understandings of what kinds of teaching and curriculum programs were effective. Their voices prevailed over teachers' voices in dictating the course of educational change. The propositional and generalized forms that university-based knowledge on teaching and schooling took were embedded in traditional assumptions of what constituted high-status university research and were also buttressed by university career structures, which valued generalized propositional knowledge and its publication in scholarly journals above all else.

Research on knowledge utilization itself also conformed to the canons of university-based inquiry. It was abstract, generalized, propositional, and detached from the everyday school knowledge of teachers. It identified universal factors that made knowledge utilization effective and established procedures of planned change through which the necessary knowledge could be processed. Factors leading to effective knowledge utilization included the need for knowledge to be relevant, clear, and "amenable to action images" (Fullan, 1981, p. 218), to be implemented with the assistance of support persons who had personal contact with teachers over a period of time (p. 219), and to be shared by teachers who had opportunities to interact about the knowledge they were required to implement (p. 226). However, the fundamental assumption on which these findings about effective

tive knowledge utilization was founded went unquestioned: that the knowledge that could make teachers more effective was other people's knowledge, not their own.

Louis and Dentler (1988) and others have concluded that "top-down reform policies rarely match the varied and often unpredictable contexts in which they must be applied" (p. 35). Writing at the end of the 1980s, Louis and Dentler (1988, p. 59) pushed the knowledge utilization paradigm to its limits by advocating what they called school-focused knowledge utilization, where educators could make genuine improvements from below if they were also provided with modest outside assistance and support to attend to and act on new information made available to them from the outside, and to do this in conditions of increased exchange and discussion among their peers. Even at the limits of the knowledge utilization paradigm, though, the knowledge at issue was still other people's knowledge that educators were asked to ingest from the "outside-in" (Hunt, 1987).

## *2. Teachers' Knowledge*

From the middle of the 1980s, another view of knowledge about teaching emerged. Despite many differences of approach, this field as a whole acknowledged the worth and legitimacy of teachers' knowledge and its roots in teachers' individual and collective experience. In traditional knowledge utilization theory, teachers' own knowledge was unhelpful to other educators as a way of understanding teaching because it was unsystematic (Fullan, 1981). In the newly emergent study of teachers' knowledge, however, the grounding of that knowledge in the lives of individual teachers, and the particularities of time and place within which they worked, was regarded as a source of great richness, practicality, and strength.

Epistemologically, research and writing on teachers' knowledge has focused on its personal and practical nature, has celebrated rather than dismissed its idiosyncrasies, has sometimes embraced its emotional and intuitive qualities as well as more usual rational and reflective ones, has valued rather than demeaned the narrative forms of storytelling and case examples through which teachers discuss their practice, and has generally sought to represent the wisdom of

teachers' practical knowledge and experience in a full and favorable light.

Several sub-traditions make up the field of teachers' knowledge. Research on teachers' personal practical knowledge points to "the existence of teacher knowledge that is practical, experiential and shaped by a teacher's purposes and values" (Clandinin, 1986, p. 4). This approach is "designed to capture the idea of experience in a way that allows us to talk about teachers as knowledgeable and knowing persons" (Connelly & Clandinin, 1988, p. 25). The routine and situated knowledge that teachers have of curriculum materials and development, subject matter, teaching strategies, the classroom milieu, parents, and so forth are the sorts of phenomena that make up the substance of teachers' personal practical knowledge. Such knowledge can also be captured and communicated in particular forms, especially through the images (Elbaz, 1983), metaphors (Russell, Munby, Spafford, & Johnson, 1988), and stories (Connelly & Clandinin, 1988) that teachers routinely use to represent their work to themselves and others.

A second tradition of work on teachers' knowledge is concerned with clarifying and developing the knowledge base for teaching. This knowledge base, it is argued, should consist of "a codified or codifiable aggregation of knowledge, skill, understanding and technology, of ethics and disposition, of collective responsibility—as well as a means of representing it" (Shulman, 1987, p. 4). One important part of this knowledge base is what Shulman (1986) calls pedagogical content knowledge: "that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding" (Shulman, 1987, p. 8). Pedagogical content knowledge is the knowledge of how to teach one's subject or subject matter. Its possession, it is claimed, is one key factor that distinguishes experts from novices in the classroom. Explicating this knowledge makes teachers' practical know-how and technique public. However, Sockett (1987) has argued that this conception of pedagogical content knowledge ignores almost everything that is moral, emotional, and specifically contextual in teaching, and therefore misses much that is important about teachers' knowledge in general (see also Hargreaves, 1995a).

A third tradition in the field of teachers' knowledge is that of reflective practice. The concept of the "reflective practitioner" has been pioneered by Donald Schön (1983) as a way of describing and developing skilled and thoughtful judgment in professions like teaching. "Reflection" here means thinking that is not just ivory-towered contemplation, but that is linked directly to practice (Grimmett & Erickson, 1988; Grimmett & MacKinnon, 1992). Teacher educators have not been slow to pick up the implications of Schön's work. They have shown how all teaching embodies reflection or thoughtful judgment within the actual practice of teaching itself (Pollard & Tann, 1987). They have tried to investigate how teachers might best represent and explain their practice reflectively to one another, especially between more- and less-experienced peers. Some have moved beyond the more technical aspects of reflection regarding the details of classroom judgment—that is, beyond reflection in action and reflection on action—to argue for more critical reflection about action and about the social conditions and consequences of one's actions as a teacher (e.g., Fullan & Hargreaves, 1991, pp. 67–69; Carr & Kemmis, 1983; Liston & Zeichner, 1991). Clearly, there are many purposes and ways of reflecting, not just one (Louden, 1991). But what matters throughout this literature are the emphases that all teachers reflect in some way: that teachers can articulate and share their reflections more explicitly and that teacher education, supervision, and development should be constructed in ways that make such explicit reflection more feasible and thorough.

A fourth tradition in the exploration of teachers' knowledge is that of teacher research. Lytle and Cochran-Smith (1992), two of the strongest proponents of teacher research, argue that "educators need to develop a different theory of knowledge for teaching, a different epistemology that regards inquiry by teachers themselves as a distinct and important way of knowing about teaching" (p. 447). When Tripp (1993, p. 14) asked the teachers he taught to keep journals and to generate critical incidents from them, he found that the problems teachers generated as inquirers were very different from the problems normally generated by university researchers. The questions that concerned teachers

whether students copying from each other was good or not, if it mattered that friendships changed so often, why students told so many tales on each other, the extent to which what happened before school affected formal learning, why students so often seemed to ignore instructions, and why teachers seemed to have to repeat things so often. (Tripp, 1993, p. 14)

For Lytle and Cochran-Smith (1992, p. 448) "what is worth knowing about teaching includes what teachers, who are researchers in their own classrooms, can know through their own systematic inquiry." Such sentiments are echoed more generally throughout the rapidly growing literature of teacher research (e.g., Elliott, 1990; Ruduck, 1985; Oja & Smulyan, 1989).

These orientations within the teacher research community express a set of political and institutional preoccupations that run throughout the field of teachers' knowledge more generally. These concern who knows, who has the right to know, and who can define what is publicly known and worth knowing about teaching. Clandinin's (1986) text on teacher images sought to counter "the general stance that teachers do not possess a body of knowledge unique to their profession." Tripp (1993) confesses to the dawning realization of his seduction by the academy when he reflects that

for the first time . . . since I had left school teaching to become a university academic, my interests were now vested in answering questions which were primarily if not solely of interest to educational researchers, questions which were generally quite as unrelated to those of my inservice teachers as were those of that teacher to his students. (p. 15)

Many advocates of teacher research and teachers' knowledge more generally are at least skeptical and sometimes scathing of the institutionalized power and pretensions of the academy to claim to know what teaching is or even to speak for teachers about what they are supposed to know. They challenge the rights of university researchers to have "the privileged way to know about teaching" (Lytle & Cochran-Smith, 1992, p. 450). However, an irony of some of the work on teachers' knowledge, especially on pedagogical content knowledge, is that it amounts to the academy capturing and reclaiming only those fragments of teachers' knowledge that can be

codified and systematized in a scientific way. This justifies the pursuit of professional status by organized teachers (Hargreaves, 1995a) (those who possess the knowledge base), the self-interested maintenance of teacher education by university professors (Labaree, 1992) (those who pass it on), and the continuing credibility of educational researchers (who make it and themselves legitimate). Even teacher research itself is not entirely immune to this irony of being recolonized by the academy, for some versions of it claim legitimacy for teachers' knowledge by urging teachers to use the customary academic tools of systematic inquiry, rather than recognizing that teachers' knowledge has valued and distinctive forms of its own.

University researchers are caught up in epistemological worlds of generalization and abstract theory. According to Elliott (1991, pp. 45–46), from the teacher's perspective, this world "is simply the product of power exercised through the mastery of a specialized body of techniques. It negates their professional culture which defines teaching competence as a matter of intuitive craft knowledge, tacitly acquired through experience." University researchers search for context-transcendent generalizations; teachers, for particulars that will affect their own situation. University researchers are energized by questioning and problems; teachers, by action and solutions. University researchers are also embedded in careers guided by the paper achievements of scientific publication, whereas teachers' careers are guided more by practical and interpersonal achievements with students and colleagues. The two positions can be summarized as in Table 1.

### **Blurring the Boundaries**

These two views of teachers' knowledge seem to represent two different epistemological and institutional worlds, each alien to the other. Closer inspection, however, reveals that the boundaries separating the two domains are not nearly so clearly drawn as first seems to be the case.

For one thing, even the most ardent advocates of teachers' practical knowledge recognize that the teachers they study also possess formal theoretical knowledge from university training and professional development experiences that can become part of their wider practical knowledge (e.g., Clandinin, 1986). Moreover, on those oc-

casions when formal teacher preparation does manage to be integrated more successfully with practical teaching experiences, the images that teachers carry with them into their classrooms and that guide their teaching are not just generic images of teaching-as-rescue or classroom-as-home, as some of the early literature on practical knowledge suggested (Elbaz, 1983; Clandinin, 1986). Teachers' images may also spring directly from the formal learnings of teacher education itself. Hargreaves and Jacka (1995), for example, document the case of a new teacher whose guiding images included "cooperation," an image she had acquired from an inspirational advocate of cooperative learning in her teacher education program. More generally, writers like Lytle and Cochran-Smith (1992) concede that alongside teacher research, there is also "a rich body of information generated by university researchers that ought to inform the practice of teaching" (p. 449). Wideen, Mayer-Smith, and Moon (in press) describe a school's teachers who shared a strong collaborative culture and a collective commitment to continuous improvement. These teachers sought out all kinds of knowledge to help improve their own school, including knowledge acquired through professional reading and the otherwise often maligned "one-shot" workshops. Over time, Wideen, Mayer-Smith, and Moon (in press) conclude, in the information-rich environment that their case-study school provided, "it was difficult to distinguish between the influence of formal knowledge and personal practical knowledge in promoting the change, as over time, they blended together." There are some kinds of school culture, it seems, where teachers are able to develop constructive and critical relationships to university-based knowledge that they can then integrate with their own practical knowledge and apply effectively within their own contexts (Hultmann & Horberg, 1995).

The postmodern information age is blurring these boundaries between teachers' knowledge and university-based knowledge even more. Computer technology and the availability of instant information are annihilating space and the boundaries it creates in the postmodern world (Harvey, 1989; Hargreaves, 1994, 1995b). The social geography of professional knowledge is undergoing a profound reconfiguration. Schools and universities are no longer locked in separate, insulated spaces.

TABLE 1

|              | Knowledge utilization                                                                                                                                                  | Teachers' knowledge                                                                                                                                                                                   |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Epistemology | generalized<br>codifiable<br>rational<br>public<br>written<br>explicit<br>theoretical<br>question-oriented<br>propositional in form                                    | context-specific<br>difficult to codify<br>also moral and emotional<br>private or interpersonal<br>oral<br>tacit<br>practical<br>solution-oriented<br>metaphorical, narrative,<br>story-based in form |
| Politics     | located in universities and<br>government-funded institutes<br>property of academic experts<br><br>high status<br>career recognition based on<br>published achievement | located in schools and<br>classrooms<br>property of school practi-<br>tioners<br>low status<br>career recognition based on<br>interpersonal achievement                                               |

Literature on professional development indicates that one of the most valuable forms of learning for teachers is the learning they get by interacting with colleagues (Little, 1990), including colleagues in other schools. With the advent of electronic and satellite communication, teachers' colleagues need not be restricted primarily to those with whom they can have face-to-face interaction in their own school space. Nor, when they want to connect with colleagues from other institutions, need teachers rely on the power-brokers of school system administration or university course teaching to bring them together on certificated courses or in-service professional development days. Teachers and teachers' organizations are now able to create their own electronically assisted professional development networks. Lytle and Cochran-Smith (1992) describe the creation of powerful teacher-research networks in the United States. Lieberman (1993) lists a wide array of professional development networks for teachers that have flourished in recent years. And in Canada, Bascia (1994) describes the Creating Cultures of Change project, funded by the Ontario Ministry of Education and coordinated by the Ontario Teachers' Federation, where many thousands of teachers are able to get on-line assistance with practical problems, acquire "insider" gossip about upcoming policies, learn about recent or upcoming professional development workshops,

locate colleagues who are experimenting with similar innovations, and so on.

Distance learning, again developed with the assistance of computer technology, is also beginning to challenge some of the traditional patterns of post-graduate study and certification for teachers. It is challenging the long-standing residential requirements for graduate study, which have hitherto bound teachers to the closed and cloistered spaces of university life for prolonged periods of contemplation. It also disturbs the linear time sequences of courses and programs that have comprised conventional university provision. Postmodern forms of free trade are now extending to cross-border interchangeability of professional certification and the international right to provide it (not least between Canada and the United States). There is a more competitive marketplace for professional credentials. These can certainly threaten rigor and standards (Calvert & Kuehn, 1993). But they are also forcing institutions such as my own to provide more modular, part-time, flexible, and part-residential courses that students can integrate more effectively with their ongoing professional obligations. Such postmodern patterns of course provision do not merely allow teachers and administrators to integrate work and study in a practical sense. They also encourage concurrent integration of university-based propositional knowledge and teacher-based practical knowledge instead of their being ordered sequentially.

In some cases, as in England, distance learning is used to establish innovative forms of teacher preparation, where student teachers spend most of their time at home or in school placements and where university-generated course materials are mediated through trained mentors who work with students in the field. Such developments are part of a wider trend I have written about elsewhere—to break down the modernistic spatial segregation between schools and universities. These segregations of space and status have marginalized faculties of education from the centers of knowledge in the university and from the busy hub of practice in schools (Hargreaves, 1995b). In many industrialized countries, initial teacher education is becoming deinstitutionalized, dispersed through space, uprooted from the university, and spread across schools. This can be seen in the movement of greater proportions of teacher preparation to schools themselves (Rudduck, 1990), in the establishment of alternate programs of teacher certification that are based in schools for teachers from underrepresented “minority” groups (Stoddart, 1991), and even in the transfer of budgetary responsibility for teacher preparation from universities to individual schools (Barton, Barrett, Whitty, Miles, & Furlong, 1994). At their worst, these developments threaten a retreat to crude, unreflective, utilitarian models of teacher preparation that encourage the unquestioning acquisition of practical knowledge as mere technique. But they also mark a new spatial terrain that challenges the status and hegemony of university expertise. It is on this new postmodern spatial terrain that the claims to develop and disseminate professional knowledge, and to integrate it effectively with practice, must now be won.

In the postmodern world, the free flow of information means that spatial distinctions between “inside” and “outside” are collapsing. Schools and other organizations are no longer clearly bounded systems. In fact, the very metaphors of “system” and of “organization” may no longer be appropriate for describing what people do and how they do it together in a rapidly changing, spatially dispersed social world (Clegg, 1990; Morgan, 1993).

Our postmodern conditions of technological sophistication, market competition, and spatial flexibility are therefore already bringing about changes in the definition, acquisition, and integration of professional knowledge in educa-

tion—changes that are starting to reconfigure the relationships between professors and teachers, universities and schools in the development and dissemination of professional knowledge.

### Cases of Cross-Border Knowledge Creation

I now want to describe some initiatives in research and publication in which I have been personally involved that, in small ways, illustrate and embody embryonic postmodern principles for knowledge development and utilization across the borders that have normally divided universities from schools. None of these examples describe full-blown collaborative research with teachers in the classic sense. Collaborative research between school teachers and university researchers is often advocated as a way of bridging theoretical knowledge and practical concerns in education, as a way of empowering teachers to be democratic participants and not merely objects of research, and as a way of guarding the ethical rights of teachers not to be exploited or demeaned by the ways in which researchers represent them. However, collaborative research with teachers does not suit all people and all purposes. In a critique of the literature of teacher research, Hammersley (1993) notes that teachers are not the only audience for educational research, nor are they the only ones with a strong interest in it. He also observes that many teachers are not always concerned about what they ought to be concerned about (e.g., the effects of ability grouping), that the unfamiliar and fresh perspective of a non-teacher outsider can be as valuable as that of an experienced and committed teacher insider, and that if we want to professionalize teaching, “we should be concerned with raising the status of teaching as an activity directly, rather than seeking to do so by appeal to the status of research” and by redefining the role of teachers to include commitment to research (Hammersley, 1993, p. 439). Moreover, re-inventing teachers as smaller replicas of our researcher selves may not suit the purposes of many teachers—who may want to “do” more than to “inquire”—and may not suit their wider life obligations and time commitments either. So we must search for other practical strategies to cross the knowledge borders of teaching and research that complement those of collaborative research. Four such examples are described below.

*1. What's Worth Fighting For? Working Together For Your School: Collaboration Through Writing and Publication*

In the late 1980s, my colleague Michael Fullan and I were approached by the Ontario Public School Teachers' Federation in Canada, one of the province's five teacher unions, to write a monograph for it on the relationship between teacher development and educational change in schools. This was eventually titled *What's Worth Fighting For?: Working Together For Your School* (Fullan & Hargreaves, 1991). The federation had already commissioned and marketed a previous monograph from Fullan on the school principalship that had been in press for approximately a year (Fullan, 1988). As Fullan and I began to develop our ideas for the substance of the monograph, the federation established some ground rules they thought necessary so that wide parts of their membership and other teachers would read it. It had to be short—not more than three or four succinct chapters—and able to be read by teachers who are hard pressed for time in one or two evenings. And it had to be accessible: clearly written, stocked with quotable and memorable phrases, and unencumbered by an excess of academic references. The Federation strongly influenced the form and the discourse of our monograph. Here, the practical knowledge of teacher union staff was significantly shaping how (though not what) we academics would write and how we would mediate our ideas to an audience whose needs our collaborators understood without losing the richness and integrity of what we had to communicate.

We planned a framework for the monograph that was then discussed and approved by the Federation's executive committee. Over many months, we drafted our text. Our aim was to write critical and cutting-edge work within a more popular discourse than the one to which we were accustomed. We drew on practical experiences and retold teacher stories that had emerged in our wider research. We drew on research to develop a position about teachers and change, knowing that morally and politically we sometimes extended beyond the strict boundaries of our evidence in doing so. The result was a critical and controversial text that was also accessible. In a Federation Executive meeting deliberating on the monograph's approval, one member

wondered whether it was “too far ahead of its time.” But the Federation gave its trust and shared our risk and, in editorial feedback, asked us to make changes only of clarity and style, not changes of substance.

The monograph was not published by a conventional book publisher. The Federation already publishes its own glossy, magazine-style newsletter and other associated publications. By taking responsibility for the monograph, it was able to complete publishing and printing in two months—much less than the time spent by almost all other publishers. There were also dissemination and marketing advantages to this strategy. An administrative assistant was hired to take orders and to package and distribute the monographs. The monograph was widely advertised through Federation publications and mailings. Provincial and regional conferences were organized to launch it. A professional development training package was prepared in association with it, and a group of trainers participated in professional development programs to learn how to mediate the material. Michael Fullan and I also actively committed to a wide program of workshops and speeches across Canada and beyond in connection with the monograph and its themes.

Adoption rates were encouraging (although we have only anecdotal evidence on other aspects of implementation). Over 30,000 copies were sold in two years. The book has been separately distributed in the United States and Australia, co-published in the United Kingdom, and translated into Norwegian, Spanish, and Chinese. A second edition has been published in the United States (Fullan & Hargreaves, 1996). We have been told in many places that the monograph has helped place school culture and teacher development at the center of educational change agendas.

To sum up: Federation staff were involved at the outset with how the monograph was conceived, especially in discourse and form. In turn, we had access to a highly influential teachers' organization and its associated networks as a vehicle for disseminating critical ideas about teacher development and school change to tens of thousands of teachers, face to face in workshops and in print through the text. By using postmodern formats of dissemination through newsletters and networks rather than using modernistic forms of distribution through conventional pub-

lishers and bookstores, our monograph also enjoyed rapid and widespread dissemination to many teachers who do not always readily participate in further educational study or engage with educational inquiry and research. Our own academic knowledge and research expertise infused the monograph with the critical content and intellectual integrity that we wished to communicate, but it was Federation staff who drew on their practical knowledge and expertise in soliciting the monograph, shaping its form, and steering its dissemination.

## *2. Beyond Transitions: Collaborative Frameworks for Development and Research*

A second initiative involves a project I am undertaking collaboratively with Lorna Earl, the research director of a large neighboring school district. In it, we have been interviewing a total of 32 Grade 7 and 8 teachers and their principals from 16 schools in 4 school districts. (In the second phase of the research, we will be undertaking classroom observations with a subsample of this group.) These teachers have been identified as having a “serious and sustained” commitment to implementing various aspects of the Ontario Ministry of Education’s reforms in the transition years (Grades 7, 8, and 9). The particular aspects of the reforms we are investigating are newly devised common curriculum outcomes, initiatives to create an integrated curriculum, and alternative forms of student assessment. This is a challenging array of reform requirements. We want to see what sense teachers committed to their success make of them, how far they are able to incorporate them into their classroom practice, what it is about their school environment that helps or hinders them in doing this, and to what extent these teachers’ lives and careers are typical of other teachers outside our sample or are exceptional in some way.

Our purpose is not to study and portray exemplary teachers and schools, to place these teachers on pedestals above everyone else. Such a strategy leads at best to voyeuristic fascination and, at worst, to shame and guilt among those who feel that the exemplars of excellence are impossible to emulate in their own circumstances of imperfection. What we want to understand and portray, rather, is what sense the reforms make and how well the reforms fare even among those committed to them. We want to see if they

are, in principle, workable, if they hang together, and what they look like when they do.

The study participants are not just objects of research inquiry here. We have organized three half-days so that teachers in the study can meet one another, discuss their work together, and actively develop a collective sense of what meanings and possibilities the reforms hold for them. The project teachers themselves have helped determine the agendas for meetings. In this sense, we have been endeavoring to connect the purposes of research and inquiry for a wider audience of researchers and policymakers to purposes of development and involvement for the teachers included in the study. Interestingly, in the individual interviews we have undertaken for this study, teachers have repeatedly commented that their reason for participating in this study was the opportunity it would give them to interact with similarly inclined colleagues from other schools. Our focus group meetings have been occasions for us to collect research knowledge, but also for the teachers to develop their practical knowledge together as well.

The prior existence of two institutional collaborations is important for facilitating these links between data collection and professional development in the design of the project. First, the project schools are all located in the four districts that comprise The Learning Consortium, along with the Ontario Institute for Studies in Education and the Faculty of Education at the University of Toronto. This Consortium has been established to create experiences of professional development and exchange of mutual benefit to all the partners. Locating the project in the Consortium will provide feedback to the districts on their policies and practices in Grades 7, 8, and 9. In return, the connection with the Consortium has secured a small amount of funding from it to cover some of the costs of teacher release time so teachers can leave school to meet their colleagues through the project. The Consortium will also provide an important avenue for disseminating the results of the project once they are known. Such prior institutionalized collaborations provide structured settings and relationships where researchers’ knowledge and teachers’ practical knowledge can connect and interact. The symbiotic relationship between the two kinds of knowledge comes about not through individual initiative or personal collab-

oration, but through structured opportunities and expectations created by the institutional collaboration.

Second, working with an experienced school board research officer who directs the research department for one of the Consortium school districts brings other benefits of collaboration. She is responsible for data collection in her own district, is able to draw on her own support staff to do so, and is collecting data of direct relevance to policy developments in that district. At the same time, her connection with an organization of school district research officers in the province has created another opportunity. This organization has received some Ministry funding to study the implementation of transition years' reforms in the province and, through connections with my research partner and discussion with our team, has decided to mount a "shadow" study in other districts, using our instruments, hence widening the scope, generalizability, and potential impact and dissemination of our own study's findings.

The design of this project is demonstrating the benefits of ongoing individual and institutional collaborations that precede and parallel specific projects. Institutionalized connections between teachers' practical knowledge and academic research knowledge stimulate and provide a pre-existing context of collaboration for new projects, rather than such collaboration having to be contrived after the project has been initially designed by academics in isolation. Such individual and institutional collaborations can combine effort and expertise, enhance resources, maximize practical relevance, and improve possibilities for dissemination.

### *3. Postmodern Policy Development in a School District: Integrating Development and Research*

A third project emerged from an approach initiated by the director of one of Canada's largest school districts, the North York Board of Education. On the basis of her direct knowledge of my writing, my presentations to teachers and administrators in the field (including several within her own district), and a relationship of mutual professional understanding that had developed slowly over several years, I was invited to bring my research and development expertise to the district in some way. I met with members of the

director's administrative team on several occasions to explore areas of concern for the district that might also be of interest to me. One area was language learning, a policy priority in the board (where over 50% of the schools' students were categorized as English-as-a-second-language and over 70 languages were spoken). This area was the focus of increasing public pressure and accountability across the board and the province and one where there had been a record of long-standing activity and success at elementary and middle school levels, but less so at the secondary school level. A second area of focus was the perceived need for restructuring the curriculum and organization of secondary schools to accommodate provincially legislated changes in ability grouping, common curriculum outcomes, and alternative forms of assessment.

In discussion, I suggested a process of policy development in language learning that would ultimately also assist the purposes of secondary school restructuring. This process is not a linear one of development followed by implementation, nor a cyclical one of development-implementation-review, followed by another cycle of the same. It is a policy process designed to include many of the system's teachers in its continuing creation and recreation so as to secure their input and commitment. The policy process is also meant to fit highly variable local circumstances of different school structures, language mixes, and so forth.

What does involving teachers in change mean when the teachers number over 4,000 and are spread across an entire system? How can cultural rhetoric about involvement be squared with the structural and political realities of complex systems? Our project has tried to address this challenging vision of a system-wide change process for language policy development—not a written and completed language policy, nor even the one-off development of a policy, but a process of continuous policy development for and dialogue about language learning. What we have been struggling with here is a new conception of policy and the involvement of teachers in it. We have tried to move from a position where teachers are implementors or tools of other people's policies to a position where they realize policies, making them their own. Indeed, we have worked hard to eliminate "implementation" from our vocabulary.

Our long-term goal is to create a complex network of teachers who engage in dialogue around the principles of language learning, the sharing of good practices, exhibitions of classroom work, and inquiry into case-study portrayals of language learning. We are endeavoring to create a policy process that is not a line or cycle, but a postmodern “moving mosaic” of teacher discussion and development groups, shifting and overlapping, moving people, issues, ideas, and activities vigorously around the system.

Our reasons for moving toward this reconceptualization of policy development are that it makes more sense for as many policy decisions as possible to be determined at the immediate level, where people will have to realize them (Corson, 1990). In a complex, uncertain, and highly variable world, planned change that follows systematic cycles of development, implementation, and review is too inflexible and bureaucratic to respond to local perceptions, needs, and circumstances (Louis, 1994). Moreover, detailed documents that freeze policies in text become outdated and overtaken even as they are being written by changing communities, new technologies, fresh legislation, research insights, and unanticipated problems (Darling-Hammond, 1995). Written policies are also problematic in that, like all written texts, they are interpreted differently by those who read them. Passed through the prisms of teachers’ purposes and perceptions, the black and white texts of educational policy become scattered into an infinite array of colors and shades of interpretation. No written policy can be clear or literal enough to secure real consensus. Policy is therefore best secured not through the sole medium of written administrative texts, but through communities of people within and across schools who create policies, talk about them, process them, inquire into them, and reformulate them, bearing in mind the circumstances and the children they know best.

One research component of this initiative has been the construction of 19 mini case portrayals in sites where interesting and broadly positive developments in language learning practice have been taking place. These portrayals will provide one set of items around which teachers can dialogue within the system. The design of the case studies has been undertaken with administrative staff and the research department in the school

district, then revised and refined through planning meetings with a group of teachers and administrators in each school. Drawing on the practical knowledge of district and school staff about the kinds of materials classroom teachers might be prepared to discuss, these collaborations led to the creation of case formats that were brief snapshots of practice rather than protracted descriptions of entire programs or schools. Also, advice from district staff led to texts that were compact collages of narrative description of commentary interspersed with journal entries, interview quotations, and examples of children’s work, rather than continuous, uninterrupted narratives of the kind that more usually characterize academic writing. In terms of the substance of the cases, district staff initially wanted only positively exemplary practices to be portrayed, but our insistence on documenting “interesting” practices, whether positive or not, threw up some provocative portrayals that were so effective in stimulating dialogue that district and school staff were persuaded to adopt them. The interaction between practitioner knowledge and research knowledge was, in this respect, genuinely reciprocal.

Opening up a further area of integration between theory and practice, the research teams have included five doctoral students undertaking a course with me on Field Studies in Educational Administration. This course is designed to bring together research experience, scholarly literature, and applied work in the field of policy and practice. Class times are flexible, have included case-study visits, and, in some cases, have been held in the district office with administrative and research staff. Case drafts have constituted student assignments. Student assignment deadlines have been synchronized with project deadlines for producing case materials. This integration has enabled the production of the case portrayals to be swift and timely. Qualitative case study often takes many months—even years—to collect, transcribe, analyze, and report. By the time it is processed, it is of little use to research participants. These cases were planned and negotiated in January, conducted in February and March, negotiated and edited through communication with the relevant school staff in March and April, and written up by May so that final packages of materials could be produced over the summer months in time for their use by North York teach-

ers in the fall. Clear, workable formats; synchronized deadlines; close collaborative relationships between the research team and staff within the district and its schools; and the tightly integrated nature of the graduate program are the things that facilitated this swift turnaround.

To sum up: this collaborative initiative has evolved from my continuing relationships with senior administrators and from a continuing presence as a writer, presenter, consultant, and workshop leader in the field. It is not a contrived collaboration composed for the first time on paper, but one that has evolved from continuing relationships among people genuinely interested in connecting theoretical to practical work across the university-school system divide. It is an initiative that tries to involve teachers in more dialogue and reflection as a routine part of their work. It is one that began from development, then extended into research as support for that development. It is also an initiative that facilitates sought-after integrations between published research, research training, and practical field connection in graduate work.

#### 4. *Professional Actions and Cultures of Teaching (PACT)*

A fourth project has much less obviously “applied” purposes. Indeed, its origins are in many respects academically self-serving in a deliberate and explicit way. Professional Actions and Cultures of Teaching (PACT) is an eight-country network of experienced researchers on teacher professionalism and teacher cultures where participants have been able to present and discuss their work, dialogue around key issues in the field, and create new individual and collaborative research projects together. It began as a professional community exclusively for experienced university researchers wanting to exchange ideas at a high conceptual level among specialists in scholarly traditions. Products have so far been of a conventional academic kind—scholarly papers and a book (Goodson & Hargreaves, 1996). There have been no pretensions to connect with practicing teachers nor with policy. We do not regret this. Our purpose has been to nurture and invigorate our own professional community. Just as teachers sometimes need to discuss their work together, or administrators need to engage in dialogue around their own special concerns, university researchers also have a need for profes-

sional community. Not all research and practice needs to be integrated and connected for everyone all the time.

However, connections to practice have not been completely absent. Funding to support our first meeting was provided by the Ontario Public School Teachers’ Federation, in part, on the basis of a record of successful collaborative work with it in the past. Funding for our meeting in April 1995 in London, England, was provided by a teacher education institute; three unions for schoolteachers, head teachers, and university teachers, respectively; and by *The Times* newspaper through its educational supplement. The connection here is not merely a financial one. In exchange for funding our meeting, the speakers in our group comprised the bulk of the program for an important national conference titled “U.K. Education Reform—What Next?” that also included the shadow secretary of state. Shortened versions of these speeches were published in an eight-page pullout of *The Times* educational supplement, which goes to virtually every school in England and Wales. The nature of the audiences our network members addressed here, orally and in print, also exerted an important backwash effect on the content of the papers and on the accessibility of their style and form of presentation. The success of the conference in England has led the University of Oslo to offer continued funding for the research network in exchange for the network’s members agreeing to contribute to a similar conference for practitioners and policymakers on educational reform, this time in Norway, at a future date. Therefore, although the starting point for PACT has been strictly scholarly, it is clear that the emergent implications for policy and practice and how we address them have also been considerable.

#### Summary

Not all collaborative initiatives in knowledge production and dissemination, therefore, need to commence in a collaborative way. Collaboration between university researchers and other educators does not need to be perpetual and ubiquitous to bring about more effective knowledge generation and utilization in education. But what does matter is that whether it begins with policy development, with pure research, or with a combination of the two, our wider work is embedded in a continuing set of relationships and activities

that straddle the university/school and researcher/teacher/administrator divides. It is these ongoing relationships and activities at the interpersonal and institutional levels that hold out the best promise for improving and extending the professional knowledge of all educators over time; there is no one best method of collaboration or integration that is meant to fit everyone.

### Postmodern Principles of Professional Knowledge Generation and Utilization

I have described two approaches to knowledge utilization and generation that are less tightly insulated from one another than is often claimed. I have suggested that distinctions between university knowledge and teacher knowledge are becoming, and should become, even more blurred in the postmodern world. Four cases—rooted in my own experience—of research, development, and writing projects that blur these boundaries in different ways have been described. From these cases, it is now possible to sketch a tentative set of principles for knowledge development and utilization in the postmodern age.

1. *Diversify what are to count as legitimate forms of knowledge about teaching and education.* There is no one best method, no singularly superior way to gather or to represent such knowledge. In a postmodern world that is encountering a crisis of representation (Lyotard, 1984), we should embrace multiple forms of representation (Eisner, 1993) as legitimate ways of displaying and communicating what we know. In a more visually inclined and non-rational world, policymakers will communicate their messages more aesthetically and effectively if they move beyond abstract argument and positivistic forms of proof to embrace stories, narratives, cases, videos, and vignettes within their work as well. Educational research, which is already granting increasing acceptance to qualitative forms of research and representation, might also widen what it counts as legitimate academic and even thesis presentation to include video, story, fictional writing, or a collage of different forms that challenges the linearity of traditional academic forms. Diversifying the forms of legitimate knowledge will multiply the points of possible aesthetic, emotional, or intellectual connection between schoolteachers and university researchers as users and creators of educational knowledge. It will bring together practical

knowledge and research knowledge by redefining research knowledge itself.

2. *Broaden the forms of discourse through which research knowledge is presented.* Do not cling to one single writing and speaking style, hoping it will meet all purposes. Experiment in writing for different purposes with different audiences. The scholarly community likes all references and contiguous work to be scrupulously itemized. The teaching community does not. Writing and speaking for different audiences in different genres should therefore be practiced if we are to capture the interest and understanding of all educators. This means that not only are clarity and simplicity of prose called for on some occasions, but also emotional arousal and aesthetic attractiveness through evocative examples, metaphor and analogy, and the general seduction of literary play. Developing these skills should be a key professional obligation in the postmodern educational world.

3. *Seek integration of intent across the range and life span of one's activities as an educator, rather than perfect praxis within one or all of those activities.* Integration of theory and practice, of different kinds of knowledge should be a matter of continuing effort and ultimate intent across our activities rather than something built into the conceptualization of every activity from the outset. Projects may begin from practical, field-related concerns or from esoteric, theoretical ones of academic inquiry. They may be instigated by professors or by policymakers and school practitioners. The temptation to make all staff development school-based or all research collaborative would be a foolish one to indulge. To incorporate integration between theory and practice in all research work from the outset would be a stilted contrivance. Recognizing the diverse forms that professional knowledge can take and seeking integration between them over time is what matters most.

4. *Widen what it means to be a teacher to include skill and practice in systematic inquiry.* For Lawrence Stenhouse (1975), systematic inquiry was essential for becoming an "extended professional" as a teacher. The skills of systematic inquiry and their relevance to on-the-job professional learning should be a key component of teacher preparation, an on-going obligation in teachers' continuing professional development, and something that the working conditions of

schooling (particularly those that affect teachers' time to meet with other teachers) should be re-designed to encourage (Lytle & Cochran-Smith, 1992). If systematic inquiry becomes a more integral part of the professional culture of teaching, it will encourage and empower teachers to identify and resolve more of their own school-level problems and create points of engagement and understanding in relation to university-generated educational research. Systematic inquiry should not, of course, be a skill that teachers practice all the time. Work demands, life commitments, and other priorities will often preclude it. But it is a skill that will be necessary at particular times, for particular purposes. So teachers must at least be prepared with the capacity, given the opportunity, to use it.

5. *Redesign educational policy processes so that teachers can become agents of policy realization, more than conduits of policy implementation.* Teachers will find it hard to be systematic inquirers in contexts where they are merely tools of the purposes of others. Moving more policy to the level of the school and supporting interactions among teachers within and between their schools will stimulate the need for systematic inquiry and for engagement with university research. The conditions for teacher research and for collaboration among colleagues of the kind that foster intelligent interaction with university research are vitally connected to the experiences teachers have of educational policy. Where policy and research are laid-on and teachers are its users, such conditions do not exist. Where policy is actively created and produced by teachers themselves, they do.

6. *Widen what it means to be a university professor or researcher in education to include practical and policy work with other educational audiences and constituencies.* The best way to disseminate educational research is to be disseminating it already. Although this sounds tautologous, it means that pre-existing engagements and commitments to presentations and workshops with teachers and administrators in the field provide places where newly emergent work can be presented as it arises. In this way, the dissemination of new work can be effortlessly inserted into a pre-existing web of engagements and relationships. To have and to meet such commitments means redefining them as a central, not a peripheral, part of one's work.

7. *Redefine academic careers in ways that align them with the more diverse definitions of knowledge, its dissemination, and its use in education.* Accommodating extensive field obligations is unlikely to be effective in more than a few exceptional cases unless academic careers are structured in ways that recognize such work, otherwise these commitments will be treated as additional and peripheral. The promotion structures of university departments normally revolve around quality and productivity of scholarly work in the conventional sense. They are modern or pre-modern in their singular recognition of scholastic endeavor. My own institution has a threefold mission of research, teaching, and field development and has a tenure and promotion structure that reflects this—promotion being attainable through demonstrated excellence in areas other than scholarly work where the candidate desires (e.g., teaching and field development), although competence in scholarship must be demonstrated as well. Exchanging field responsibilities for teaching responsibilities and incorporating multiple criteria into promotion structures so as to align with the multiple missions of university professorship in applied fields are two ways in which academic work and academic careers can be redefined productively in education.

8. *Create award-bearing course structures that transcend space and time.* Move away from being the modernistic, monopolistic university provider to whom teachers must come for residential learning toward employing distance learning and other means for creating courses that use space and time more flexibly in accumulatable modules and credits of work. These enable teachers to engage with research in ways that can integrate more flexibly with their lives and careers. They also enable the work of teachers and of university professors in joint professional development or school improvement initiatives to be granted academic credit and award-bearing status for student achievement and recognition of professorial teaching loads alike.

9. *Provide policy funding and logistical support for establishing teacher networks of professional development and teacher-generated research.* This gives teachers the status and encouragement to generate their own shared knowledge and to engage critically and collec-

tively with knowledge generated elsewhere. It makes teachers more equal partners in the knowledge generation and utilization process.

*10. Establish and support school system/university partnerships and other "bridging cultures" that can connect these two worlds.* Bridging organizations brings together the worlds of teaching and research and schools and universities along with their interests and assumptions (Watson & Fullan, 1992). It is on the borders of our work, where we can explore different cultures and assumptions, that the most interesting and innovative things can often be achieved (Giroux, 1992). Bridging organizations can meet joint interests of the participants in professional development and research. The cultures that such new organizations create can also act as "ginger groups," pushing back the boundaries of practice and inquiry within their members' host institutions.

### Conclusion

The postmodern order is challenging the certitude of science and the sacrosanct nature of its procedures. Giddens (1991) and others have noted that with the collapse of such certainty, we are all thrown back on our reflective resources of knowledge, judgment, and morality to act capably in our world (Taylor, 1991). In this postmodern world, many forms of knowledge are emerging as worthwhile and legitimate in ways that challenge the epistemological superiority of the academic establishment. Strong school cultures and vibrant professional development networks create conditions where teachers can share their own practical knowledge and have independent access to other knowledge from elsewhere. As these patterns of networking and collaboration gather strength in the postmodern world, the intellectual hegemony of universities to control credentialed knowledge will be challenged. It is, therefore, time for those in universities who are concerned with the theory and practice of knowledge utilization to recognize and engage with these diverse forms of knowledge and their representation and to work intelligently with those who are their bearers. If the 10 postmodern principles of knowledge utilization and generation I have outlined have any force and validity at all, they have implications not only for how we might redefine our individual intellectual endeavors, but also for how we should redesign our

educational institutions, the commitments and career structures that comprise them, and the claims to knowledge and expertise that define their missions.

Those who design and disseminate educational policy in legislatures and school districts are not exempt from these implications. Traditional patterns of policy development and implementation—what Darling-Hammond (1995) calls "old paradigm" policy—provide poor support for critical interaction and collaboration between school practice and university research. "Old paradigm" policy is hierarchical. It lodges design and development responsibility within a political or administrative elite (with greater or lesser degrees of "consultation"). It requires teachers to "implement" (be the tools of) system policies, rather than develop their own. Research knowledge is seen as something for teachers to apply and the system to implement, rather than as something teachers can engage with and critique, using their own base of practical knowledge as a valid resource. "Old paradigm" policy, Darling-Hammond argues, has a poor record of educational success. Instead, she argues that we

must find ways to build the capacity of local actors to make good decisions on behalf of their unique students and communities to support their development of knowledge about good practices, their ability to analyze and respond to problems and needs, and their incentives for being collectively responsive and responsible to the children and communities they serve. (1995, p. 160)

However, the reality of educational policy in almost all areas, Darling-Hammond laments, is that "menus of reform tactics, overwhelm (such) authentic inquiry" among teachers themselves (1995, p. 161). "New paradigm" policy is not indifferent or laissez-faire. Its distinctive role, rather, is to establish broad educational principles and create middle-level organizational frameworks, such as professional learning networks, local professional communities, teacher dialogue groups, and school system/university partnerships that facilitate authentic inquiry among teachers themselves and support them to develop the collective strength to interact constructively, yet also critically and assertively, with the scholarly world of university research (Giddens, 1995).

This paper has not argued for diluting research, nor has it insisted that all educational research be collaborative or applied. What matters, rather, is that the knowledge that might transform teaching and learning in positive ways should itself be transformed in how it gets produced and disseminated. The purpose of this paper has been to try and set out some examples and principles of how these transformations might be achieved.

## Notes

<sup>1</sup>An earlier version of this paper was presented to an invitational seminar titled "When School Meets Science," sponsored by the Swedish National State Agency of Education and coordinated by the Dalarna Research Institute, Sweden, in January 1995.

<sup>2</sup>Although the characteristics of postmodernity and, indeed, claims regarding the emergence of a distinctively new postmodern age at all are hotly contested within social theory, many writers agree that at the heart of the social transformation that many nations are now experiencing is the globalization of trade, currency exchange, and other economic activity and the globalization of information, communication, and technology. Some of the consequences of these patterns of globalization include accelerating change as information circulates more rapidly and transactions occur more swiftly, compression of time and space because of the speed of information flow and the irrelevance of geography as a barrier to it, and scientific uncertainty as rates of scientific disconfirmation of previous knowledge increase and as independent electronic access to information and knowledge challenges the claims of academics and bureaucracies to specialist expertise. I have described these characteristics of the postmodern age and their implications for schools more fully in my book *Changing Teachers, Changing Times* (Hargreaves, 1994). Other key writers on the condition of postmodernity include Harvey (1989), Giddens (1991), Taylor (1991), and Zukin (1991).

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