Juxtaposing Practice, Research, and Theory:
A Course for Inservice Teachers

By Jane A. Van Galen & Venta Silins

With other advocates of school change, we hold a profound respect for the central roles of teachers in the reform of public schools. As school change theorist Michael Fullan (1982, p. 107) has observed, "Educational change depends on what teachers think and do—it's as simple and complex as that." As teacher educators, we have worked to create opportunities for professional development that prepare teachers to assume more active and informed roles in changing schools.

Yet as teacher educators, we have often grappled with the tensions inherent at the intersections of the university and the workplaces of our students. On the one hand, the academy offers rich theoretical and empirical discourse that can launch and inform reform initiatives. On the other hand, the language of this discourse and the dissemination of the work of the academy too often excludes (whether by commission or omission) the practitioners who are both the subject and the object of much of academic analysis. Formal academic research too often attends to only select educational questions and problems—typically those of greatest interest to those who work in universities (Sizer, 1988). In the meantime, as Cochran-Smith and Lytle (1990, p.3) have noted, missing from academic research are "the voices of the teachers themselves, the questions that teachers ask, and the interpretive frames that teachers use to under-

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stand and improve their own classroom practices." Researchers and practitioners each agree that the gap between their respective worlds is wide (Berliner, Resnick, Cuban, Cole, Popham, & Goodlad, 1997; Donmoyer, 1998; Glaser, Lieberman, & Anderson, 1997; Robinson, 1998).

Beyond our concerns about the sometimes-restricted content of academic research, we recognize the serious limitations of "top-down" models of change in which teachers are defined primarily as technicians implementing models of instruction and curriculum formulated by others (Cochran-Smith & Lytle, 1990; Fullan, 1982, 1993, 1999; Hargreaves, 1994; Schon, 1987). Practitioners generally distrust the relevancy of abstract "theory" while researchers often downplay the "uncertainty, uniqueness, and value conflict" that characterize the daily work of teachers. As educational change theorists have observed, many important educational problems are simply not resolvable by the mere application of research-based technical solutions (Schon, 1987, p. 6-7).

Teachers are not alone in their misgivings about the adequacy of research for solving complex problems. Hargreaves (1994, p. 57), writing about the challenges of education reform, notes that distrust of the relevance of "science" for solving educational problems is, in part, a manifestation of broader cultural change:

> The knowledge explosion...has led to a proliferation of expertise; much of it contradictory and competitive, all of it changing. This has begun to reduce people's dependency on particular kinds of expert knowledge, but also created a collapse of certainty in received wisdom and established beliefs.... In postmodern societies, doubt is pervasive, tradition is in retreat, and moral and scientific certainty have lost their credibility.

A postmodern culture of doubt and uncertainty renders published research more suspect to teachers; this same culture makes teaching more complex and more problematic.

Rethinking the Research Course for Inservice Teachers

Against this backdrop of post-modern uncertainty, competing interests, and insufficient models of school change, we have sought ways to support the "workforce or reform" (Connell, 1991) from our positions within the university. We have been experimenting with graduate education in which inservice teachers are encouraged to assume active, critical roles in their engagement with the worlds of scholarship, research school change. In this article, we discuss our collaborative work with a graduate course in an M.Ed. program that attempts to juxtapose the work of teachers with the work of academic scholars in ways that position teachers as life-long inquirers (Fullan, 1993), rather than as mere consumers of research conducted by others (Cochran-Smith & Lytle, 1990).

As one part of the experiment, this course is co-taught by a librarian (Venta) and an education faculty member (Jane). This course is taught on a new university campus, where faculty and staff have had the rare opportunity and the challenge to

build programs and courses "from the ground up." The campus places a high priority on effective teaching and interdisciplinarity. Within the dynamic atmosphere of this new campus, faculty and their colleagues in academic support areas frequently collaborate on courses. These collaborations have created ideal circumstances for exploring the possibilities of graduate study in which roles of faculty and students shift from the relatively passive dissemination and receipt of knowledge to the pursuit of the skills and dispositions of life-long learning.

In an era of prolific and competing claims of expertise, it seemed timely to create a course in which teachers would come to recognize, develop, and to name facets of their own professional wisdom and to learn to better interrogate the truth claims of education researchers. In this course, students come to understand when their expertise can be enriched by their access to academic research and when their expertise transcends that of those who work in universities. Understanding the multifaceted and complex relationships between academic scholarship and the craft of teaching is a central goal of the course.

The M.Ed. program in which this course is offered is committed to supporting the roles of teachers as leaders in changing schools to better serve all children. In contrast to some M.Ed. programs that might emphasize the mastery of technical, pedagogical skills, the M.Ed. program at our institution seeks to prepare students to grapple with "the complex relationships and enduring questions [of teaching] that require the exercise of sound professional judgment" (Lord, 1994, p. 182).

Such an approach to inservice teacher education requires that students be "at home" within the rich and often complex professional literature on teaching and learning. Thus, when designing this program, we created a non-traditional course on inquiry to be offered very early in the students' program. The course described here is the first of three required "professional seminars" taken by students early in the program. In this Professional Seminar we attempt to reduce doubt and uncertainty without resorting to positivist certitudes; instead, we strive to support professional and intellectual development by enabling students to become adept at locating, interpreting, critiquing and applying information resources. In this course, teachers develop a deeper and broader knowledge of published research. More importantly, they develop as strong, resourceful and courageous professionals with rich resources at their disposal.

Specifically, we challenge students in this course to develop:

- facility in navigating professional networks of information and discourse, so that "theory" and "practice" can come to inform one another;
- dispositions toward grounding their professional decision-making in broader discourse about standards of professional practice;
- the capacity for framing professional dilemmas and "enduring" questions in multiple ways;

- the ability to formulate multiple "solutions" to professional problems, and to have the tools to critically evaluate the appropriateness of each.

We attempt to accomplish these things through team-taught seminars structured around issues and dilemmas posed by a series of inductive course assignments. We describe these assignments below.

Growing Inductively: Course Assignments

Teacher Research

One of the assignments of the course requires students to engage in a teacher-research project. We want them to learn of the discipline and the value of systematic inquiry; we want them also to experience the sense of agency that accompanies the hard work of implementing change within one's own spheres of influence. As Fullan (1993, p. 15) notes, the development of personal purpose in teaching (an attribute we believe is essential for deep engagement in, rather than being a casualty of, the change process) requires inquiry that is "fueled by information, ideas, dilemmas, and other contentions within the environment." The teacher research project is designed to enable students to name and to frame some of the vexing complexities of their teaching environments.

Throughout the quarter, students engage in data collection and analysis on a professional dilemma, tension, or question of their own choosing. The sophistication of students' starting points may vary tremendously, yet through the processes of learning to ask careful questions of their students and colleagues, to observe deeply and carefully, and to examine the artifacts of their work (the methods of teacher research emphasized in this course), each begins to learn to see the familiar in new ways.

For example, some students begin with something that they want to "try out" in their practice. Others begin by looking at an unclear situation that they want to better understand. Other students investigate discrepancies between plans and reality, between values and actions, between different perspectives of the same event (Altrichter, Posch, & Somekh, 1993). In a recent term, for example, one new teacher interviewed colleagues and administrators in a project designed to create opportunities for her colleagues to meet regularly to share information about their work. Several other students took careful field notes on the composition and function of successful and unsuccessful cooperative learning groups in their classrooms in efforts to improve students' performance. Another teacher who had conducted a series of inservice sessions on the World Wide Web for colleagues surveyed and interviewed colleagues to learn more about why many of the voluntary participants in these workshops had not implemented web-based projects in their courses. From such starting points, the students begin looking more closely at their own work and seeking the perspectives of others on their questions.

As the students grapple with their preliminary data collection, many experience almost immediate dissonance between what they *thought* they'd find and what they actually see. One teacher, frustrated by what she saw as a lack of support from the families of her students, began the project wanting to investigate ways to "make" parents more accountable for their children's learning. She began with a parent survey and was surprised to find that most parents wanted to be more involved with their children's education but lacked crucial information about new curriculum standards. In pursuing questions of her own choosing, this student (and many of her colleagues) soon found themselves in a state of "productive disequilibrium" (Lord, 1994, p. 192), in which their assumptions about their work were seriously challenged. We believe that encountering such professional dissonance early in a graduate program creates excellent incentive for turning to the rich professional literature that can help students to articulate and to address their questions. Our next steps in the course are to introduce the students to the literatures in their fields, and we believe that this access includes locating and critiquing relevant information within the "proliferation of [contradictory and competitive] expertise" (Hargreaves, 1994, p. 57).

Tapping into the Wisdom of "Distant Teachers"

Toward the ends of making academic literature more accessible to students who are grappling with authentic and pressing professional questions, we work to demystify the processes of academic publishing. We want their reading of relevant literature to be discriminating, informed and confident. Too often, the monological tone of academic publishing relegates teachers to deferential positions lower in an "hierarchy of credibility" (Altrichter, Posch, & Somekh, 1993) than those who work in universities. While we acknowledge that teachers and scholars contribute very different perspectives to discourse about schooling, we want our students to understand that they can bring professional wisdom to their critical reading of the literature. As we state in the course goals, we want the students *not* to read the literature for technical solutions to complex educational problems, but rather to read for richer understanding of how theory and practice can inform one another.

Venta spends parts of several class sessions early in the quarter introducing the library databases. The students' first forays into library searches typically provide powerful lessons in the proliferation of competing knowledge claims, as they commonly find hundreds of possible resources on the broad topics on which they are searching. Our next challenge is helping the students to begin to assess the credibility of the many sources before them. Venta steps in to help the students to develop specific, sophisticated data base searching skills. By the end of the third class meeting, students can use the data bases to make preliminary judgements about whether or not resources have undergone peer-review or about whether an author is using empirical or non-empirical argument. They learn the terms that academics use to address particular questions and to find conceptually-related areas

of the literature. As they are challenged to narrow (or to broaden) their library searches, the students begin developing more precision in the ways that they talk and think about their projects. At the very points at which their own teacher research projects are creating disequilibrium in their professional thinking, they are making leaps in their abilities to access the wisdom of "distant teachers."

While they develop facility in using data bases to make informed judgements about resources likely to be of most value to them, we believe that becoming critical readers of the literature also requires that students understand how knowledge is constructed in the field. We look closely not only at how researchers address educational questions, but also at how their findings are disseminated. Early in the term, we spend class time with students in small groups comparing and contrasting scholarly journals. We bring in stacks of publications ranging from the *American Education Research Journal* to content area publications to *Rethinking Schools*. We talk about the conventions of peer review, revision, and publication and help them to learn to identify the editorial processes by which an article might come to be published in a particular journal. We ask them to talk about who the intended audience of the journals appears to be, and we talk about the pros and cons of disseminating work within relatively narrow professional networks. We ask them to consider whether there are any particular editorial biases evident in the selection of articles that are published or in stated editorial policies, and whether or not these potential biases may be sometimes warranted.

The Language Issue

The students bring many, many questions to this discussion. They often bring professional and personal skepticism to these initial conversations. They react most vociferously to the jargon and other obscure language that they encounter in many of the journals they review. We compare the use of particular language in education publishing with other instances that they can identify of language being employed as a marker of membership within inner circles, and we also talk about the necessity of sometimes using complex language to convey complex ideas. We talk with them about debates over accessibility and language within the literature itself. Too often, some of the more honest and articulate students say what appears to be on the mind of many of the students: that the language in many academic journals makes them wonder if they are not simply "stupid." We are disturbed that any of the academic writing available to the "workforce of reform" can generate self-doubt and silence rather than informed agency.

As these students read the literature and eventually search for appropriate voice for their own academic papers, they identify the written discourse in their fields (for all of the valuable content contained therein) as one of the ongoing obstacles to their participation in change in schools. They contend that the language excludes them from participation in the professional conversation about the conditions of their own work and that they feel that their own credibility is contingent on their adopting

voices that are not their own. As we explain to them, our wish for these students is similar to those articulated by Peggy McIntosh (1985, p. 9):

> I hope that we can move students from "My voice should not be heard at all" to "I don't like the official tone I am forced to take in those situations; it misrepresents me" through "What *other* voice can I find to convey not an autonomous self-confident me (which doesn't exist), but the self-in-relation, not coercive, and not deceptive, but social? If we give students a double vision of social reality, I think they can learn both the language of power, which we use standing at the podium…and the language of social change, which suggests alternate visions of how to use that power.

For the students, coming to terms with the symbolic functions of academic language in maintaining hierarchies of credibility and power (Delpit, 1988) is an important step in coming to terms with their own potential for initiating change. We are pleased that they, themselves, begin to raise these questions in their very first graduate course.

Academic Research and School Change

The students bring other questions to their analysis of academic journals. They question the narrow focus of many empirical articles, and we talk about the conventions of empirical work that require focus on limited numbers of variables.

The students want to know why research is primarily disseminated in the form of journal articles and other academic publications, and if the authors believe that the format of journal articles is the most effective way to communicate with teachers about potential avenues for change. They wonder whom authors of the articles believe holds the responsibility for translating sophisticated empirical and theoretical work to more practical recommendations for practice. Some raise sophisticated questions about the limited potential about writing about schools and classrooms for initiating actual change and wonder what else professors do to support change in schools. Jane talks about faculty career paths that create incentives to publish about schools but which can create disincentives to actual collaboration within schools, and about how reward structures within the University require the approval of one's academic peers but seldom attempt to take into account the relevancy of one's work to practitioners. We talk about the many reasons that university professors publish their work, and how the potential of changing practice in schools may be just one of the reasons that academics disseminate their research and their intellectual analysis to others.

We discuss professional norms that value the abstract and generalizable over the immediate or practical and about how such norms extend far beyond Education departments in universities. The students come to understand that the task of scholars is "look[ing] for patterns across populations, trying to see dimensions of the forest, ignoring that each tree takes its own shape" (Sizer, 1988, p. 5). They recognize that their most pressing professional questions are often appropriately

about the "trees", and that specialized "Big R" research (Hubbard & Power, 1999) can therefore speak to only some of the questions that they grapple with in the dailiness of their professional lives.

We spend considerable time analyzing this disjuncture between questions pursued by academics and the questions often generated by teachers. Through examination of many articles and books that they begin to access, we help them to understand that published research most often speaks to issues at the "macro" level of schooling, while their professional dilemmas are often at "micro" levels of buildings and classrooms (Sizer, 1988). For example, one student recently wanted to research "solutions" to the problem that students in her middle school rarely turned in required homework. She was initially frustrated that no researchers had formulated specific strategies that would solve such a problem with students similar to those in her school. Yet as she moved more deeply into her own data collection, listening to the perspectives of colleagues and students on homework, *and* as she began to read previously untapped work on student motivation, she began to question whether the "problem" of incomplete homework was within the nature of the work assigned rather than within the students. Her reading on the "enduring questions" of motivating students gave her a broader range of possible solutions to the professional problem she was investigating, while her data collection into the dynamics of her unique circumstances sensitized her to the need to consider explanations for her students' behaviors beyond her initial assumptions.

From Cynicism to Wisdom

We think that the questions that the students raise are excellent. Yet in these early class sessions, we strive to find the balance between wise, critical analysis and cynicism. While we want them to know of the strengths *and* the limitations of the enterprise of academic publishing, we address such issues only in the hope of enabling them to understand the content *and* the contexts within which research and theory tare generated. We want them to be better able to make sense of the changing terrains of thought in education without resorting to doubt and or moral faltering (Hargreaves, 1994, p. 57). As Wexler (1987, p. 105) wrote:

> The socially organized process by which knowledge is produced makes its own reality. The more that we live in the world of constructed knowledge, the more does the translation of knowledge into something other than its own production leads us away from understanding what shapes our lives.

Academic publishing shapes teachers' lives, not only in the implementation of research-based reform and policy, but in the construction of professional and intellectual hierarchies that presume the deference of teachers. Cynicism cannot help our students find their strength and their voices.

In large part, the scales in this course are tipped toward healthy critical analysis by the students' own curiosity about the unanticipated complexities unfolding in

their own teacher research projects. For the most part, by the time we reach the point of these discussions in the course, the students *want* to know much more and they are intrigued by the myriad of resources they locate. We work to ensure that they have the tools for navigating their way amongst the many articles and books they find. Venta brings to these discussions her expertise in the many the library tools such as reference materials and advanced database search strategies. She works individually with students to refine the language and strategies of their investigations. Jane continues to pose questions of the students' tentative hypotheses in their research projects, and these questions frequently send the students in search of deeper and broader perspectives.

And we work to equip students with yet more tools for analysis and critique.

Critiquing Empirical Articles

As the term proceeds, we move from the "big picture" of how knowledge is constructed and disseminated in the field to the more micro-level of analysis of how empirical studies are conducted.

We begin with in-class exercises in which students are challenged to inductively design quantitative and qualitative research projects that could yield generalizable findings. As they struggle to make choices between equally viable or equally limited options in the designs of their studies, they come to understand the complexity of the conventions of empirical work. Through these exercises, we emphasize that empirical research is a process of decision-making, and we consider the consequences of different decisions made by class members about such research components as operational definitions or sampling strategies. These discussions raise wonderful questions about issues as far-reaching as the limitations of standardized testing to the ethics of offering "treatments" only to some children. Students come to appreciate the "trade-offs" inherent in most research designs.

After working with the class to inductively design a research project, we spend another class session engaged in collaborative critique of one study. We create small groups, each of which will look at the article from a different perspective.

One group carefully examines the methodology of the experiment that we are studying. Other groups work with Venta to tap the many library tools that will enable them to critique the article even more deeply.

One group uses databases and reference materials to learn more about the journal in which the article is published. They look at the types of articles that are published in the journal and contrast these with the types of articles that they've seen in other journals with which they are now familiar. They debate whether teachers are presumed to be among the intended audiences for the journal. They investigate the professional credentials of members of the editorial board. They explore the web-sites of professional organization that sponsors the journal. They raise questions about the perspectives that may not be represented in this journal and about the intended readership of the journal.

Another group of students does research on the authors of the article, using biographical reference materials and conducting data base searches to find other publications by the authors. They investigate the institutions with which the authors are affiliated. We challenge them to ask how the research questions of these authors have evolved, and about whether their research methods have changed over time. We direct them to the Citation Index for clues about the stature of these authors in their field.

Yet another group looks for other published works on the same topic as that of the article under scrutiny by the class, raising questions about the breadth and depth of the field. We challenge these students to try to identify "major players" and dissenters from their investigations. We ask them to identify the most common and conventional methodologies for research on this topic and to identify any examples of more creative or intriguing research designs. We ask them to locate sources of non-empirical discourse on the topic of the article, and to consider what questions can and cannot be addressed empirically about the questions raised by the authors in the article.

Eventually, the class comes back together to share their collective wisdom, and they come to understand that they have access to tools that enable them to form sound professional judgements about the credibility of the many voices that clamor for their attention (while we assure them that they would never be expected to draw upon all of the potential resources when doing more routine reading).

After these class sessions, each student is required to write a detailed critique of an article reporting an empirical study that can inform his or her own data collection. We are consistently impressed with the students' facility in identifying the key questions of the articles, with their self-conscious cleverness in raising questions about how authors might have compromised in their research designs, and with the sense of agency in evidence as they appropriate the language of the academy to critique empirical work. This assignment gives them the opportunity to display their understanding of the field, but is also enables them to experiment with the role of entitled critic rather than passive spectator.

In these exercises, we again look for balance between critique and cynicism. We often find ourselves reminding students who are becoming proudly adept at finding flaws in research methodology that there are no perfect studies. Yet while we work to rein in heady critique, we nod in agreement as the students come to understand that they are well-served by drawing upon their own professional knowledge of students and their own immersion in the dailiness of classrooms (Sizer, 1988) in their consideration of the authors' assumptions and decisions. We also encourage humility by our ongoing critique of their *own* data collection as we hold them to high standards of systematic data collection and analysis in their own studies.

In this part of the course, we "cover" most of the same terms and concepts that are covered in traditional research methods texts, yet the tone of this segment of our teaching differs from that of many traditional research methods courses. We present

the conventions of research as flawed but powerful tools for addressing professional questions. We are clear that research, as published, has only limited value for directly influencing the practice of individual teachers. We are teaching these things within a paradigm of exploring intersections of theory and practice, rather than within research-dissemination models of school change that are implicit within too many research methods texts. We are assuming that published research is but one part of the dialogue leading to more effective schools. We believe strongly that teachers must be active participants in that dialogue.

In analyzing the conventions of empirical work, we invite our students to come to a better understanding of the assumptions and perspectives of those who generate new knowledge and theory. As they struggle with formulating their own data collection strategies, the students are particularly disposed to considering the models offered by others and to reflecting upon the many ways in which strong empirical work can inform their decision-making within their own complex professional contexts.

These students often enter the M.Ed. program believing that "you can find research to prove anything." We work to enable them to move beyond cynicism to professional judgment about the value of empirical work, and to build their capacity to draw more deeply upon professional resources to support their own endeavors.

Critical Bibliographic Essay

As students continue to identify credible published resources to inform their work, we want them to develop facility in locating particular studies (and their own questions) within broader fields of inquiry. As part of their skills of critique, we believe that they must also understand how a field develops. We again engage them in critique within small groups in which they begin to evaluate information in the contexts of the ongoing, asynchronous "dialogue" in which a field of scholarship develops.

We ask students who are working on similar research questions to compare and contrast empirical studies that they have identified as being useful for informing their projects. We ask them to look for common and discrepant findings among the studies they each have identified and to formulate explanations for discrepancies. We ask them to consider why the questions raised by some authors working within a field may not be raised by others, and to ground their critique of their individual articles in their emerging understanding of the theoretical and empirical development of the particular field of study. For example, the students learn that the article that we studied collectively in a previous class session is one of the first empirical studies to address particular questions, and they compare the methodological sophistication of this article with others done by the same authors in a field with a much longer history. We talk about how even though the work of scholars is often constrained by norms of individuality rather than of collaboration, all good studies build upon what has come before and all good studies ground their questions and methodologies within the development of their field.

The students are then each required to write a "critical bibliographic essay" encompassing the development of the field of their research topic in which they address the following questions:

- Who are the "big names" writing about your question? How do you know?
- In what journals are the best works in this field published?
- What are "typical" and/or creative empirical approaches for addressing this question?
- Who are major dissenting voices in this field?
- What non-empirical issues are being discussed in this field?
- How might you explain discrepancies between findings of different research projects?

The critique of an empirical article moved students into their first forays of informed critique. This bibliography assignment moves students even further away from the role of passive consumers of educational research to active decision-makers about what is of most worth for informing their work. They must draw on their emerging knowledge of the conventions of "good" research and skills of information literacy as they sift through the plethora of resources available to them.

In writing these essays, students often come to realize that they are posing questions about their own work that have not yet been considered by academics, or they note that their own data collection sheds some light on gaps in the published work they are reading. In these small ways in this beginning course, these teachers position their work within broader professional and intellectual communities, without constraining their thinking about their work to whatever issues may already have been addressed by distant scholars.

Refining the Questions

As they read, collect, and analyze data, and begin to view their questions through the new lenses available to them through expanding access to vast information sources, we expect that students will reframe their questions over the course of their projects. We believe that this inductive process of reframing questions is central to the course. Schon (1987, p. 4) notes that coming to terms with the adequacy of one's professional questions is an essential component of professional development:

> Through complementary naming and framing, the practitioner selects things for attention and organizes them, guided by an appreciation of the situation that gives coherence and sets a direction for action. So problem solving is an ontological process. ...a form or worldmaking.

Within such a model of professional education, critical thinking, agency, and acknowledgement of the many ways of knowing about educational problems supplant dependency upon expert knowledge. Yet access to expert knowledge is central to the processes, and we find that as students engage in these processes of looking more deeply at their own work, they are motivated by professional and intellectual curiosity to learn more from others. Their deep engagement in data collection *and* reading brings them face-to-face with the need for changes in their own practice while also offering abundant alternatives for consideration.

The juxtaposition of the course's invitations to look closely at their assumptions about their own work and to read deeply from others who have grappled with similar intellectual and professional questions enables students to unearth layers of complexity in their practice. They learn that they cannot circumvent their professional responsibility for engaging in systematic and deliberate reflection and analysis of the distinctive "uncertainty, uniqueness, and value conflicts" (Schon, 1987, p. 6-7) inherent in their workplaces by merely implementing quick fixes from the professional literature. The students may begin the course hoping for simplistic solutions to complex educational dilemmas, but their framing of these dilemmas becomes more sophisticated as they learn more from their own data collection and as their reading enables them to see the familiar through new lenses.

For example, a middle school teacher examining the grouping of students for better behavior management shifted her focus from the students to her own teaching as she read more deeply in the field of cooperative learning and as her data began to reveal different levels of student engagement for different types of assigned projects. Her research journals and final paper demonstrated her growing sophistication in formulating multiple solutions to teaching challenges, as she began to look at facets of group work beyond student assignment that she now understood as influencing the success of the groups. In her final paper, she wrote:

> I felt that I came to a temporary conclusion about how to best choose student groups, so I began looking more closely at the inquiry process itself and its relationship to group work.... Later, I realized that I had been trying to tackle two separate issues: how much learning takes place in these inquiry-based team activities vs. how to assess the learning that takes place.

We wrote earlier of the student who began her project believing that she had to find ways to "make" parents take more responsibility for their children's achievement. Her project shifted from one in which she assumed that *others* had to change, to one in which she had to acknowledge that her own assumptions about parent involvement were flawed. She drew upon the professional literature to guide her initial forays into new ways to reach out to families. She sponsored several family forums to explain new curriculum standards and experimented other new print and electronic communication tools. She was able to gauge the success of these experiments though her growing sophistication in data collection. Her growing

appreciation of the complexity of interactions with parents fueled her growing enthusiasm for taking confident, professional initiative toward resolving long-standing local conflicts between home and school.

The teacher described earlier as grappling with how to motivate her students to complete the pages of homework they were assigned began asking insightful questions about whether her students would actually be learning anything of significance were they to complete the worksheets and textbook study questions. Her reading and her data collection enabled her to move from a specific question framed in assumptions about student deficits to questions framed in more "enduring" issues of authenticity and relevancy in the curriculum. She was now in a position to begin forays into modifying her curriculum, and she was well-equipped to access and critique the rich professional literature as she began these endeavors.

These students and their classmates have taught us important lessons about the relationships of theory, research, and practice. As these students looked more closely at one facet of their practice, they inevitably generated important questions about other facets of their work. While we do require students to focus on particular questions and on particular lines of research in the course, we are mindful that teachers simply do not have the luxury of specialization that is required of academics. The students inevitably begin reading broadly, beyond the parameters of the literature on their own research questions. We are pleased as they uncover connections among lines of inquiry, when the move fluidly between the multi-layered dimensions of practice (Meacham, 1998) and the somewhat circumscribed literatures on particular topics.

The students appropriately conclude that individual studies and even individual lines of research might render classroom dilemmas too simplistically. Yet their reading and their inquiry often compel them to read broadly across several lines of research. We believe teachers' appropriation of the literature must be fluid, interdisciplinary, and sometimes eclectic. While scholars may narrow their intellectual and professional interests over the course of their careers, we would expect that strong, critical teachers would move gracefully among ever-growing circles of discourse communities as part of their professional development. Teachers who have developed strong skills of information literacy will do so most gracefully.

Concluding Comments

When we taught Research Methods courses in more conventional ways, we struggled with convincing students of the relevancy of the course content and the potential of inquiry for their own professional development. Yet we believed with school change theorist Michael Fullan (1993, p.15) that "Inquiry is the engine of vitality and self-renewal."

We believe that our students' enthusiasm for inquiry at the end of this revamped Research Methods course are apparent in the following quotes from recent course papers:

- "I could take my research in a hundred different directions. The more areas I study, the more questions I come up with."
- "My question seemed to be expanding, becoming more liquid, more demanding."
- "Many questions remain unresolved at this time and many new questions surfaced throughout my study. I am...very intrigued."
- "It's none too surprising that as I began reviewing the literature and searching for research related to my question, I continually discovered many more topics that I also found very intriguing. I am now staring at a pile of journal article abstracts an inch thick."
- "I have just begun to answer my research question. The questions have led to further questions about my teaching practice."

It is clear from these papers that the students are learning to think metacognitively about their own approaches to addressing professional questions and dilemmas. They are developing habits of inquiry and of questioning, and are beginning to experience the power of making modifications in their practice that are grounded within the discourse of broader professional communities. As they come to appreciate their capacities for naming, framing and resolving their professional challenges in different ways, they are beginning their professional journeys from doubt and cynicism to agency.

We believe that grounding M.Ed. students in skills of information literacy and self-critique will help to enable teachers to embrace and to lead change, for as Fullan (1993, p. 66) has noted, the teaching profession is beset with change:

> Because post-modern society is dynamically complex and highly political, the change process, however well-planned, will be fraught with unpredictable and uncontrollable problems and opportunities which in turn will generate scores of ramifications. Educational change is inevitably non-linear and unending.

In this course, we are able to juxtapose careful examination of practice, research, and theory to illuminate the potential of *each* for addressing the many different challenges and tensions of teaching in dynamic times. We believe that students in this Professional Seminar leave the course on a trajectory of professional growth grounded in the intellectual vitality that comes from learning to name and claim their own distinctive areas of wisdom and knowledge among many competing knowledge claims. In this course, and in the courses to follow in this M.Ed. program, inquiry and intrigue with the possibilities that lie ahead supplant precarious acquiescence with received knowledge.

Note

1. We thank Hubbard and Power (1993) for this term.

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