

Has Reflective Practice Done More Harm than Good in Teacher Education?

La pratique réflexive fait-elle plus de mal que de bien en formation des enseignants ?

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Le praticien réflexif : mythe ou réalité en formation à l'enseignement ?

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[See table of contents](#)

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Article abstract

Why do we emphasize reflective practice so extensively in pre-service teacher education? What evidence do we have that frequent references to reflection are improving the quality of the teachers we prepare for certification and careers in teaching? Whatever reflection and reflective practice are, they are not ends in themselves; hopefully, they are means to the end of better teaching practices and better learning by students in schools. In this article I explore reflection and reflective practice from several perspectives, including my personal experiences as a teacher educator working with individuals preparing to become teachers of physics. The question asked in the title captures my fear that the ways teacher educators have responded to and made use of the concepts of reflection and reflective practice may be doing more harm than good in pre-service teacher education. To begin, I consider teacher education practices before and after the arrival of the term reflective practice. I then consider elements of Schön's (1983) work and review five articles about reflective practice in teacher education; this is not a formal literature review, but rather an effort to show how virtually every article about reflective practice seems to be driven by its author's personal perspective. The article continues with personal interpretations and illustrations and concludes with five generalizations about teacher education practices that indicate that much more work needs to be done if references to reflection are to do more good than harm in preservice teacher education programs.

Has Reflective Practice Done More Harm than Good in Teacher Education?

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Abstract: *Why do we emphasize reflective practice so extensively in pre-service teacher education? What evidence do we have that frequent references to reflection are improving the quality of the teachers we prepare for certification and careers in teaching? Whatever reflection and reflective practice are, they are not ends in themselves; hopefully, they are means to the end of better teaching practices and better learning by students in schools. In this article I explore reflection and reflective practice from several perspectives, including my personal experiences as a teacher educator working with individuals preparing to become teachers of physics. The question asked in the title captures my fear that the ways teacher educators have responded to and made use of the concepts of reflection and reflective practice may be doing more harm than good in pre-service teacher education. To begin, I consider teacher education practices before and after the arrival of the term reflective practice. I then consider elements of Schön's (1983) work and review five articles about reflective practice in teacher education; this is not a formal literature review, but rather an effort to show how virtually every article about reflective practice seems to be driven by its author's personal perspective. The article continues with personal interpretations and illustrations and concludes with five generalizations about teacher education practices that indicate that much more work needs to be done if references to reflection are to do more good than harm in preservice teacher education programs.*

Titre: *La pratique réflexive fait-elle plus de mal que de bien en formation des enseignants ?*

Mots-clés: *pratique réflexive, formation des enseignants, pratique, recadrage*

Résumé: *Pourquoi avons-nous mis l'accent sur la pratique réflexive de façon si abusive dans la formation initiale des enseignants? Sur quoi nous appuyons-nous pour avoir la certitude que de développer la réflexivité permet l'amélioration de la qualité des enseignants que nous préparons ? Quelle qu'en soit sa forme, la pratique réflexive, ne doit pas être une fin en soi: elle est un moyen qui permet d'atteindre une finalité qu'est l'enseignement, voire, une finalité de développement des apprentissages des élèves. Dans cet article, nous explorons la réflexivité à partir de plusieurs angles d'entrée, y compris nos expériences personnelles en tant que formateur d'enseignants travaillant avec des personnes qui se préparent à devenir des enseignants de physique. La question posée dans le titre exprime notre crainte quant à la finalité de la formation des enseignants que les formateurs d'enseignants attribuent parfois à la pratique réflexive; ce qui, à notre avis, peut faire plus de mal que de bien dans la formation des enseignants, avant l'emploi. Nous nous attarderons d'abord sur la différence entre les pratiques de formation des enseignants avant et après l'arrivée du terme pratique réflexive. Nous examinerons ensuite les travaux de Schön (1983) à travers cinq articles sur la réflexivité en formation des enseignants. Il ne s'agit pas d'une revue de la littérature systématique, mais cet effort démontre comment presque tous les articles sur la pratique réflexive semble être dictés par les intérêts personnels de ses auteurs respectifs. Nous poursuivront avec des interprétations et des illustrations et terminerons par cinq généralisations au sujet des pratiques de formation des enseignants qui indiquent qu'un travail colossal reste à faire afin que les références à la réflexivité fassent in fine plus de bien que de mal dans les programmes de formation des enseignants.*

Introduction

Teacher Education before Reflective Practice

Now in my 35th year as a pre-service teacher educator, I am old enough to have experienced personally what teacher education was like before reflective practice was thrust upon the world by Donald Schön. Before 1983, many of us asked teacher candidates to write journals. In that distant era, I heard complaints from some students that they were being asked to keep separate journals for each of their many courses; they naturally asked, “Why can’t I keep just one journal for all my courses?” Reading journals and offering comments was a challenging process because few guidelines were offered to guide the process of keeping a journal. Our assumption seemed to be that writing is good for you when you are learning to teach. Making comments was challenging because each journal was unique and personal: Who was I to tell someone that her journal was lacking in some important respect?

Once teacher educators took up the terms *reflection* and *reflective practice* in a serious way not long after 1983, many of us began to ask teacher candidates to reflect. Many of us seemed to assume that the meaning of *reflect* is self-evident. I hear many complaints from students that they are weary of so much reflection, particularly when so many different assignments call for reflection and when they have been given little guidance in terms of what reflection involves, what the results of reflection should look like, and how reflection can help them learn to teach. Personally, I have grown weary of hearing that teacher candidates have been asked to “write a one-page reflective paper” on a particular topic. I am particularly concerned about the lack of guidance and about the tendency to separate reflection (whatever it may be) from the context of personal action.

My Personal Introduction to Reflective Practice

I had a unique introduction to *reflection* and *reflective practice* by interacting personally with Donald Schön in 1984, 1987, and 1990. Those personal interactions had a profound influence on my interpretations of and responses to the concept of reflective practice. I read *The Reflective Practitioner: How Professionals Think in Action* (Schön, 1983) at the end of my sixth year working in pre-service teacher education. The book caught my attention because it spoke strongly to the tension I was feeling between teaching classes of pre-service science teachers and observing those same students during their teaching placements. What we talked about in classes rarely seemed to be happening in the lessons they taught when I observed them. I accepted this as reality, but I needed to understand better what was happening to those I was teaching. A year’s sabbatical leave gave me the opportunity to see another teacher education program in action, to work with others who were interested in Schön’s perspective, and to write my first proposal for a research grant to begin to study the implications of reflection-in-action for teacher education. By good fortune, a colleague arranged for Donald Schön to give three lectures at Queen’s University in 1984. These were three of the most engaging lectures I have ever attended, and I still find it stimulating to listen to recordings of those lectures. While *reflective practice* was becoming a common phrase in teacher education, I was looking for *reflection-in-action* in teacher candidates’ teaching and in their writing about their teaching.

Teacher Education after Reflective Practice

For several years, reflective practice became a major topic at educational conferences, and then it subsided rather quickly; later, it took on a new life and today the topic persists at conferences but appears not to be a significant focus of teacher educators’ attention; it is just there, perhaps taken for granted. Many books and articles have been published about the place of reflection in teacher education, yet the impact on practice has been difficult to judge. Certainly there has been an influence on our professional language as teachers and teacher educators, for the words *reflect* and *reflection* are now commonplace. Today, almost 30 years since Schön’s first book was published, virtually every website for a teacher education program seems to mention the importance of becoming a critically reflective teacher. The program in which I teach

offers the following statement on its website:

Queen's Consecutive Education Program allows students to develop the skills needed to become a critically reflective teacher—the kind of teacher who looks beyond the immediate activities of daily practice. The program will foster a natural inclination to teach. You will learn how to guide and motivate the enquiring minds of children and young adults. . . . Teacher candidates participate in a combination of course work and practicum experiences in each term. The program provides teacher candidates with both the theory and practice of teaching, using in-school experiences as the basis of discussions. (Queen's University Faculty of Education, 2012)

Perhaps unintentionally, this statement seems to define a critically reflective teacher as “the kind of teacher who looks beyond the immediate activities of daily practice.” One might assume that this is meant to make the program sound attractive to would-be applicants, but looking beyond immediate activities does not sound particularly unique or innovative.

1. Donald Schön's Perspective on Reflective Practice

Schön's (1983) subtitle, *How professionals think in action*, suggested that there may be a pattern of behaviour common to people working in many different professions. After raising arguments critical of typical thought patterns that he described as technical rationality, and after pointing out that how we define what we see as a problem (problem-setting) is different from how we solve a problem (problem-solving), Schön went on to suggest that a process he named *reflection-in-action* is central to finding new ways to approach familiar problems. The following excerpt from a lecture (Schön, 1987b) describes the process in relation to teaching. As this extended excerpt reveals, his goal was to bridge the gap between research and practice by calling attention to an active process that he saw as artistry:

This capacity to respond to surprise through improvisation on the spot is what I mean by reflection-in-action. When a teacher turns her attention to giving kids reason, to listening to what they say, then teaching itself becomes a form of reflection-in action, and I think this formulation helps to describe what it is that constitutes teaching artistry. It involves getting in touch with what kids are actually saying and doing; it involves allowing yourself to be surprised by that, and allowing yourself to be surprised, I think, is appropriate, because you must permit yourself to be surprised, being puzzled by what you get and responding to the puzzle through an on-the-spot experiment that you make, that responds to what the kid says or does. It involves meeting the kid in the sense of meeting his or her understanding of what's going on, and helping the kid co-ordinate the everyday knowing-in-action that he brings to the school with the privileged knowledge that he finds in the school. . . .

Teaching in the form of reflection-in-action . . . involves a surprise, a response to surprise by thought turning back on itself, thinking what we're doing as we do it, setting the problem of the situation anew, conducting an action experiment on the spot by which we seek to solve the new problems we've set, an experiment in which we test both our new way of seeing the situation, and also try to change that situation for the better. . . .

*Now, if we ask the question, “What hangs on this difference between school knowledge and reflection-in-action?”, I think it is in fact a revolutionary difference, and it has to do with healing certain splits that deaden the experience of school. They are splits between school and life which make many kids, perhaps most kids, believe that school has nothing to do with life. They are splits between teaching and doing which makes it true for most of us who are teachers that what we teach is not what we do, and what we do is not what we teach. They are splits between research and practice, which means that the thing we call “research” is divorced from, and even divergent from, the actual practice in which we engage. Now all of these things are associated with the argument I made in *The Reflective Practitioner* [1983], not about teacher education specifically but about all professional education in the modern research university.*

The various splits that Schön describes begin to sound very much like the complaints of teacher candidates about the split between their in-school practicum experiences and their in-university course experiences. After practicum experiences, do teacher candidates begin to believe that there courses have “nothing to do with life”? When a teacher educator tells teacher candidates in a lecture that they should not lecture to students in schools, they sense a split between our teaching and our doing. How often do teacher educators successfully demonstrate and explain that their teaching practices have been developed according to research-based principles?

In the remaining sections of this article, I continue to raise questions related to the possibility that our frequent references to and requests for reflection by teacher candidates may be doing more harm than good. I begin by discussing five significant articles selected somewhat arbitrarily from the extensive literature on reflection in teacher education. I emphasize the limited references to the teacher education practicum, where teacher candidates are actually actors rather than participants, as well as the fact that each writer eventually reveals a personal agenda for writing about reflection. I continue with discussion of some of my personal experiences as a teacher educator, to indicate why I am worried that extensive use of *reflection* has not been shown to be beneficial and may in fact be turning teacher educators away from a significant opportunity to understand how their professional development can be improved as their teaching career unfolds.

2. Five Perspectives on Reflection and Teacher Education

2.1 Linda Valli: Cases and Critiques of Reflective Teacher Education

Valli's (1992) collection of seven case studies of teacher education programs focusing in various ways on reflection provides one of our best resources for understanding the complexity of what is involved in developing *reflection* in a meaningful way in a pre-service teacher education program. The case studies illustrate clearly some of the many different ways in which reflection has been and can be interpreted in teacher education programs.

Like most articles published about reflection and reflective practice in teacher education, there is little direct and specific reference to the pre-service practicum in the six critiques that offer various ways of interpreting the seven case studies. Calderhead's critique (1992) drew some valuable conclusions but there is little evidence in the literature to indicate that his advice has been heeded:

There are few well-established ground rules for teacher educators in this new area, and as a result tutors and supervising teachers are required constantly to examine what they are doing and where they are going. Teacher educators have set themselves some ambitious aims in reflective teaching and it is as yet uncertain what is actually achievable in the context of a pre-service training program. (p. 145)

[Questions about what is possible] can only be answered through the experience of teacher educators, and the evaluation of that experience, in developing teacher education programs for reflective practice and in promoting our understanding of professional growth. In the process of developing reflective teaching as a goal of pre-service education, there is a need to develop our own knowledge about reflective teaching and how it is facilitated. (p. 145-146)

Before we can have reflective teachers, we need reflective schools and reflective teacher educators. (p. 146)

Calderhead's words help to sum up the contribution of cases and critiques such as those provided in Valli's book: *Teacher educators themselves need to make paradigmatic changes before expecting pre-service teachers to do the same.* Teacher educators need to explore how discussions of reflective practice, such as those by Dewey and Schön, apply to their own personal practices as professionals acting in the teacher education classrooms of our universities. We may well do more harm than good by adding the vocabulary of *reflection* to our mission statements and our assignments without also providing extensive support that includes modeling and explicit links to teacher candidates' practicum experiences.

2.2 Lynn Fendler: Do Reflective Teachers Need the Assistance of Experts?

Fendler's (2005) article is written from a historical perspective and is an essential piece of reading on the topic of reflection. She begins with a simple quotation from Zeichner (1996, p. 207): "There is no such thing as an unreflective teacher." This statement is often quoted in misleading ways because it is taken out of context when it omits the preceding and following sentences. A more complete quotation reads as follows:

First, one must recognize that all teachers are reflective in some sense. There is no such thing as an unreflective teacher. We need to move beyond the uncritical celebration of teacher reflection and teacher empowerment and focus our attention on what kind of reflection teachers are engaging in, what it is teachers are reflecting about, and how they are going about it. (p. 207)

Fendler's quotation appears to suggest that all teachers are reflective; the longer quotation, with the critical words "in some sense," points to the importance of the content and processes of teachers' reflections. We definitely do more harm than good if we subscribe to a statement such as "there is no such thing as an unreflective teacher." Such a statement is just as foolish as ones like "all teachers are reflective practitioners" or "new teachers are naturally reflective."

Like many who wish to interpret Schön on the topic of reflection, Fendler goes back to Dewey, just as Schön himself did. Fendler quickly makes the link between teacher reflection and the improvement of teaching, which many assume to be the point of reflection. Thus we see that reflection is not an end in itself but a means to the end of improvement, and most professionals are assumed to want to improve personal practices whenever possible. Fendler suggests that her article offers two contributions to the literature—a historical perspective and a perspective grounded in the work of Foucault and sociology.

In the conclusion of the article, while still suggesting that all teachers are reflective, Fendler poses a crucial question: "If educational researchers believe that all teachers think about what they do, then why is there so much talk about making teachers into reflective practitioners?" (p. 23). Fendler goes on to say:

It is ironic that the rhetoric about reflective practitioners focuses on empowering teachers, but the requirements of learning to be reflective are based on the assumption that teachers are incapable of reflection without direction from expert authorities. The case of teacher reflection provides an example of the need for educational researchers to examine their assumptions about the relationship between research and teacher education. (p. 23)

While there are many assumptions to be examined, particularly with reference to teachers as reflective practitioners and the significance of reflective practice for teacher development, my focus is not on empowerment of teachers or on whether reflective practice requires training

by experts. Indeed, the training by experts issue is an unusual one to raise, as is the idea that there is “no such thing as an unreflective teacher.” Analyzing the tasks of teaching from Schön’s perspective of *reflection-in-action* and the development of new practices based on reframing that is stimulated by interpreting students’ action in new ways is not an approach taken by most teachers.

2.3 Ken Zeichner: Reflective Practice for the Advancement of Democracy

Zeichner is well known to most teacher educators and his extensive writings include many discussions of reflective practice in the context of teacher education. In a 1996 chapter on “Teachers as reflective practitioners and the democratization of school reform,” Zeichner uses the terms *reflective practice* and *reflective teaching* interchangeably. He sees reflective practice as a “movement” (p. 200) and he uses phrases such as “reflection on one’s own experience.” Zeichner goes on to discuss “four ways the concept of reflection has been employed in pre-service teacher education that undermine the expressed emancipatory intent of teacher educators” (p. 202). The four interpretations merit closer examination:

1. Replicating research practices.
2. Avoiding ethical and moral implications
3. Avoiding social considerations
4. Isolating individual teachers

Zeichner sees viewing reflection as replicating research practices (pp. 202-203) as a strategy for encouraging teachers to replicate practices that empirical research by university researchers has shown to be effective. He correctly sees this as a persistence of theory-into-practice, or technical rationality. Under the heading of avoiding ethical and moral implications (pp. 203-204), Zeichner sees an interpretation of reflection that focuses on the means of teaching to the neglect of the ends of teaching (the ethical and moral implications). The next interpretation of reflection is critiqued as limiting reflection to the individual classroom so that the social considerations that affect teachers’ work are ignored. Finally, Zeichner critiques views of reflection that restrict it to individual teachers without interaction with other teachers. “All of these practices help create a situation in which there is merely the illusion of teacher development and teacher autonomy” (p. 206).

Having reached this conclusion, Zeichner then reveals the main purpose of his chapter: “Reflective teacher education that fosters genuine teacher development should be supported only, in my view, if it is connected to the struggle for greater social justice” (p. 206). In short, Zeichner appears to be using the idea of teachers as reflective practitioners as the basis for an argument that reflective practice should only be fostered in the context of reducing the social injustices that are so apparent in most societies. His purpose is not to set out a clear conception of reflective practice in the context of teaching and learning, yet it may be read that way by virtue of his high profile within the teacher education community.

2.4 Neville Hatton and David Smith: Levels of Reflection Leading to Reflection-in-Action

Hatton and Smith (1995) provide a detailed analysis of the concept of reflection in teacher education. Their discussion is an interesting mixture of grounded claims and personal assertions about various levels of reflection, including technical, descriptive, dialogic and critical reflection (p. 45). They associate technical reflection with the idea of technical rationality much criticized by Schön (1983), while descriptive, dialogic and critical reflection are associated with Schön’s *reflection-on-action*. They interpret Schön’s *reflection-in-action* as the “contextualization of multiple viewpoints” drawing on the four types of reflection (Hatton & Smith, p. 45). Their discussion of the place of reflection in teacher education is driven and supported by a small-scale project at the University of Sydney. They offer a statement that points in the direction of seeing that a paradigmatic change is required when incorporating *reflection* in a pre-service teacher education program:

A critically reflective approach demands an ideology of teacher education different from that traditionally employed, which usually involves models of “best practice”, emphasis on competences, and unrecognized conflicts between institutional ideals and workplace socialization. There need to be changes in emphasis and created opportunities which establish appropriate and supporting conditions for fostering in students different kinds of reflection. (p. 38)

The use of terms such as “unrecognized conflicts” and “changes in emphasis” could be a misleading attempt to minimize the significance of adopting a focus on reflection throughout a teacher education program, misleading because, as Schön (1995) suggests, a major shift in epistemology is required.

A significant contribution of this article appears in the authors’ quest for evidence of reflection or reflective practice and they offer lists of characteristics for descriptive writing, descriptive reflection, dialogic reflection and critical reflection (pp. 40-41, 48-49). Their focus in the quest for evidence of reflection appears to be on what students have written about “the process of their curriculum planning, development, implementation, and evaluating” (p. 42). They acknowledge that this is *reflection-on-action*, but they hope that *reflection-in-action* was also present: “It is probable, however, that *reflection-in-action* occurred while the events were originally unfolding, so that students were thinking about reasons for what was going on as it happened” (p. 42, emphasis in original). They offer an additional comment about the tension between reflection and existing assumptions: “The traditional academic genre is characterised by features that are in many ways the antithesis of the personal, tentative, exploratory, and at times indecisive style of writing which would be identified as reflective” (p. 42).

The argument presented by Hatton and Smith recognizes that *reflection-in-action* is a complex phenomenon that arises in the context of professional action. Their conclusion suggests that they are committed to seeing reflection as a process that develops through a hierarchy of

levels from technical through descriptive to critical; only then is the practitioner who is acquiring experience ready for *reflection-in-action*. Their conclusion is informed by a study of pre-service teachers but they do not provide evidence to support the hierarchy of levels of reflection. They emphasize that their students need to develop metacognitive skills in order to move toward *reflection-in-action*, but they seem reluctant to admit that teachers in training might be able to experience moments of reframing while they are teaching real students in real classrooms.

2.5 Carol Rodgers: Returning to Dewey and Ignoring Schön

Rodgers (2002) makes a valuable contribution to our understanding of the concept of reflection by returning to the work of Dewey. “Over the past 15 years, reflection has suffered from a loss of meaning. In becoming everything to everybody, it has lost its ability to be seen” (p. 843). This lengthy article offers an excellent introduction to Dewey’s work on reflective thinking. Interestingly, despite Schön’s role (1983) in taking our attention back to Dewey and the concept of reflection, she ignores the opportunity to interpret Schön’s work in the light of that of Dewey. Rodgers describes and discusses four criteria of reflection, drawn from Dewey’s work: (1) a meaning-making process, (2) a rigorous way of thinking, (3) a process that happens in community and (4) a set of four attitudes—whole-heartedness, directness, open-mindedness and responsibility. “The four attitudes comprise the essential constituents of what Dewey calls readiness to engage in reflection” (p. 862). She summarizes her argument by saying that she has demonstrated

that reflection is not an end in itself but a tool or vehicle used in the transformation of raw experience into meaning-filled theory that is grounded in experience, informed by existing theory, and serves the larger purpose of the moral growth of the individual and society. (p. 863)

Rodger’s position that reflection is a means, not an end in itself, is an important signal to teacher educators. Rodgers’s article includes descriptions of teachers’ experiences but she does not speak explicitly of the practicum experiences of those learning to teach. However, it does seem important and appropriate to view the role of the pre-service practicum from the perspective of transforming experience into “theory that is grounded in experience” and “informed by existing theory” (p. 863).

3. Reframing while Teaching and Learning to Teach: The Potential of Listening in Moments of Uncertainty and Surprise

Having considered a small sample of the extensive literature concerning reflection in the context of teacher education, I see three points of particular interest:

1. Donald Schön’s 1983 book is generally recognized as the source of the ubiquitous references within teacher education to the importance of reflection, critical reflection and becoming a critically reflective practitioner. Schön did not use the word *critical*, which seems to have been added when the word *reflection* alone did not produce the desired results; adding this word and constructing levels of reflection is an interesting exercise but again there is little evidence that it has changed how people learn to teach.
2. Schön’s ideas have been discussed and critiqued extensively (e.g., Eraut, 1995) but there has been little effort to identify what Schön’s work could contribute to the education of new professionals, including teachers.
3. My personal interpretation is that Schön was urging us to consider much more fully and carefully how new and experienced professionals *learn from their own experiences of professional action*. While there is extensive reference to reflection in the literature of teacher education, very little of that discussion relates to school practicum experiences where beginning teachers are able to learn from first-hand experience with the guidance of a mentor. Schön’s (1987a) second book focused on learning from experience in interaction with a mentor.

Schön does not provide the last word on what might be involved in how a professional learns from experience. However, my sense is that pre-service teacher education generally suffers from a major problem: *There is little or no connection between university-based classes and school-based practicum experiences in pre-service teacher education*. I have worked in the same university-based teacher education program for 35 years. For all but two of those years, the program structure has been traditional. The two years that were revolutionary proved to be too revolutionary for many of my colleagues. As I listen to the practicum experiences of those I teach, I hear one universal conclusion: *Practicum experiences are the single most important element of the pre-service program*. Increasingly, my students suggest that both course content and written assignments need to have more direct connections to their practicum experiences.

What might be achieved by more direct connections between the two very different learning contexts—courses and practicum—of most teacher education programs? While most experienced teachers have access to professional development resources (such as conferences, workshops, and professional learning communities within their schools), it will always be their classes and daily interactions with students that are their major opportunities for learning that improves professional practice. Perhaps the familiar gap between theory and practice is so pervasive because school classrooms rarely provide explicit attention to learning from experience. It is far more common to learn by reading and by listening to those (teachers) who are expected to know more than their students.

Whatever one makes of Schön’s (1983) account of *reflection-in-action*, I suggest that we see little evidence of his ideas in discussions of reflection in teacher education *because we find it so difficult to construct direct links between education classes and practicum experiences*. University classes often seem perched on what Schön (1983, p. 42) referred to as the “high, hard ground,” while practicum placements require would-

be teachers to perform in “a swampy lowland where situations are confusing ‘messes’ incapable of technical solution.” Those who teach university-based teacher education classes tend not to be the individuals who observe teacher candidates in their practicum experiences and thus tend not to be reminded regularly of how complex and unrealistic it is to speak of “putting theory into practice.” To reflect-in-action, a teacher candidate has to *be* in action—in a practicum classroom. In most education course classrooms, teacher candidates are not active as teachers. My own work with Schön’s account of reflection-in-action suggests that we must help teacher candidates to learn how to improve their learning from classroom experiences. Doing so is certainly not easy (Russell, 2005a), for it can rarely be done by telling. Teaching how to learn from experience requires deliberate and explicit modeling by teacher educators. Understanding the importance of naming problems carefully before trying to solve them is one of Schön’s contributions. Another involves the importance of a reflective conversation with the classroom situation. Professionals need to pay close attention to moments of uncertainty, surprise and puzzlement that may stimulate reframing and generate new, possibly more productive ways of interpreting student behaviour, generating perspectives that may suggest new courses of action.

4. The Complexity of Change in Teaching and Teacher Education

I had the unusual opportunity to work with experienced teachers for three years before beginning to teach pre-service teachers. In the last of those three years with experienced teachers, a colleague and I worked with five history teachers and their principal, first showing them how to identify patterns in transcripts of recorded lessons and then working with them to construct alternative patterns of teacher-student interaction that might be more productive (Ireland & Russell, 1978). The teachers arrived at two broad conclusions: (1) They had not realized how much they talk in every lesson they teach, and (2) they had no idea that it would be so hard to move away from that dominant pattern of teacher-student interaction in which teachers do most of the talking. I respected these teachers’ willingness to open their teaching to the eyes of others and I respected their conclusions.

Four months later, I was standing in front of my first teacher education classes with a personal resolve that I would find ways to reduce the amount of talking (telling) that I would do. Like those history teachers, I had no idea how to replace talking with more productive alternatives. In retrospect, that first year as a teacher educator had many moments of what Schön would later term *reflection-in-action*. I struggled to develop new patterns of interaction, and the most productive proved to be patterns for listening to those I was teaching. I met with small groups to get to know individuals better, and I instituted a mid-course teaching evaluation in which I collected free responses under the headings of strengths, weaknesses and conclusions. Returning the results to my classes prompted discussions in which I could begin to explain why I was trying to reduce the amount of time I spent talking to them. Unforgettably, one student expressed outrage by asking “Why didn’t you tell us you weren’t going to tell us?”

As I complete 35 years of work in pre-service teacher education, I am acutely aware of the profound stability of teaching in general and teacher education in particular. I have been fortunate to do my research and writing in the context of teacher education itself. Over time, my teaching of pre-service teachers has changed dramatically as I listened to those I was teaching, as I studied my own teacher education practices (Schuck & Russell, 2005), and as I encountered innovative teaching ideas that I could adapt to teacher education and then work to make part of my professional practice.

The program in which I have worked has seen many changes over three decades, yet in many respects it has not changed at all (Sarason, 1996, provides valuable insights into this common occurrence). Practicum placements are now slightly longer. Thanks to the addition of *reflection* to the teacher education vocabulary, classes and assignments have changed in wording, yet there is little evidence to suggest profound changes in results. In 1997, a radical change in program structure placed extensive practicum experience (14 weeks) in schools ahead of most education coursework. Nine months later, faculty members voted to abandon that radical change, despite enthusiasm from the teacher candidates who learned so much from their time in schools.

Change in teaching takes time but, most importantly, it requires a willingness to take risks and a willingness to fail. Reflection-in-action, driven by “a reflective conversation with a situation,” (Schön, 1983, p. 163) can inspire more productive ways of interpreting the complexity of what happens in our classrooms, but not every moment of reframing will generate a productive change. Similarly, when reframing inspires one to risk a new action, the new action itself will rarely be perfect the first time it is attempted and will require patient refinement and further conversation with the situation before it become a habit that is more productive than the one it replaces. In one of his last publications, Schön spoke of the need for a new scholarship:

The epistemology appropriate to the new scholarship must make room for the practitioner’s reflection in and on action. It must account for and legitimize not only the use of knowledge produced in the academy, but the practitioner’s generation of actionable knowledge in the form of models or prototypes that can be carried over, by reflective transfer, to new practice situations. The new scholarship calls for an epistemology of reflective practice, which includes what Kurt Lewin described as action research. But in the modern research university and other institutions of higher education influenced by it, reflective practice in general, and action research in particular, are bound to be caught up in a battle with the prevailing epistemology of technical rationality. (Schön, 1995, p. 34)

Schön was not optimistic about the prospects for epistemological change within universities and schools. My goals in this article have included reminding readers that a *reflective practice* perspective is not easily achieved, either personally or institutionally. We must not expect

our students to adopt new frames and change old habits when we who teach them have not done the same ourselves, so that we understand in deed rather than only in word just what it is we are asking our students to do.

5. Personal Actions Based on Reflection-in-Action

To continue this analysis of Schön's *reflection-in-action* and the general neglect of his specific contributions within the literature of research on teacher education, I offer several examples of reflection-in-action that have made significant contributions to my personal practice as a teacher educator. I remind readers that before publishing *The Reflective Practitioner*, Schön published several books with Argyris (e.g., Argyris & Schön, 1974) that focused on the organizational and interpersonal challenges associated with the fact that most individuals display significant gaps between their *espoused theories* (what they say they are doing, their frames for teaching) and their *theories-in-use* (theories inferred from their observed actions, their teaching habits). This is an important issue for pre-service and inservice teacher education, where inconsistencies between what we do and what we say are quickly noticed by our students. Those learning to teach soon become frustrated when they are simply told that they should not lecture to students; being told not to do to students what one's teacher is doing is an obvious and frustrating contradiction.

I am not well qualified to address the broad question, "What is learning?," yet I ask it here in the context of individuals who are learning to become teachers. Each individual who is learning to teach begins that task with a powerful apprenticeship of observation (Lortie, 1975); she or he knows (by observation, not deliberate instruction) the *habits* of teachers and will enact those habits in a classroom, albeit awkwardly at first. Yet most beginning teachers seem to assume they know little about teaching. While they have acquired many habits of teaching during their careers as students, they know very little about the rationales for teaching—the perspectives on learning held by the teachers whose habits they have acquired indirectly and unintentionally. I like to use the term *frames* for these perspectives, because that term links well to Schön's idea of reframing. Notice that Schön's discussion suggests that it is when events are puzzling, surprising, or uncertain that we may, in a reflective conversation with the materials of the situation, be inspired to see things in new ways—to reframe the problem. Learning from experience is a complex process that is quite unlike learning from books or learning from others' experiences. When a teacher learns from experience, that learning has to be seen simultaneously from two perspectives—habits *and* frames. If we learn from experience, we act differently in the next similar experience and we think differently about how and why we are acting in a particular way in that context of action.

As every parent knows in some significant sense, a child's learning from experience also tends to be much more powerful than learning by reading or being told. Although I was not the first to think of this example, I always turn to a statement such as "The stove is hot" to illustrate three types of learning. When we are *told* that the stove is hot, the stove probably looks no different than when it is cold; there does not appear to be any reason to act differently. When we *see* someone else touch a hot stove and jump back quickly, the stove may look no different, but the reaction of another person may send a message of caution that is easier to internalize. When we *touch* a hot stove ourselves, we jump back reflexively and we also realize that while the stove looked no different, it actually was quite different, and so we learn firsthand the lesson that we should be cautious when approaching a stove.

In my own 35 years of learning from experience as a teacher educator, change has come slowly at some times and more rapidly at others. Schön's 1983 book provided the first major instance of reframing of my experiences during the previous six years as a teacher educator. I was puzzled by the fact that when I visited my students in their practicum classrooms, I saw little evidence of behaviours that might have been inspired by their education classes. They were teaching as they had been taught. *Reflection-in-action* and the concept of reframing gave me a powerful way forward. As my own frames changed, my habits also changed, however gradually, as I found new resources and risked new patterns of interaction in my teacher education classroom.

6. Has Reflective Practice Done More Harm than Good in Teacher Education?

I believe that adding the terms *reflection* and *reflective* to the daily activities of teacher education may be doing more harm than good for several reasons, including the following observations. I have no empirical evidence for these claims, but I believe that many teacher educators will sense their validity.

- Teacher educators rarely *explain* what they mean by reflection.
- Teacher educators rarely *model* reflective practice.
- Teacher educators have separated reflection from the world of action and experience.
- Teacher educators generally *fail* to link reflection clearly and directly to professional learning.
- Teacher candidates tend to complete a program with a muddled and negative view of what reflection is and how it might contribute to their professional learning.

Schön put the task quite clearly in a presentation to the John Dewey Society within the American Educational Research Association:

The challenge to the professional schools, I think, is this challenge of educating for artistry: Helping people become more competent in

the indeterminate zones of practice, at carrying out processes of reflection-in-action, and reflection on reflection-in-action. And helping them to coordinate that artistry with applied science, because I'm not arguing that applied science should be thrown out the window. I'm arguing that it has a special zone of relevance which depends on our ability to do these other things, on the one hand to set problems in ways that the categories of applied science can fix and fit and, on the other hand, to fill with art the gap between theory and technique and concrete action. (Schön, 1987b)

I conclude that we, as teacher educators, may be doing more harm than good in teacher education if we fail to help teacher candidates come to see reflective practice as a process whereby professionals link the artistry of teaching with relevant applied science. The place to develop skills of reflective practice is in the practicum classroom as a novice teacher, not in the halls of the university as a student. In the university classroom, it is the teacher educator who can model and make explicit the nature of reflective practice. As teacher educators, we need to find effective ways to link our reflective moments in our classrooms with experiences of reflection-in-action that our students experience in the practicum classroom. The challenge is significant and risky, but if we genuinely aspire to link practice and theory, we must accept the challenge.

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