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Transferring Learning from the Classroom to the Workplace: Challenges and Implications for Educational Leadership Preparation

Bruce G. Barnett

As American education enters the 21st century, cries for improved school performance are being voiced by parents, state departments of education, and the federal government. The recent “No Child Left Behind Act” underscores the current pressures on schools to be held accountable for raising student learning outcomes, often referred to as *school improvement* (Harris, 2002). School improvement is most likely to occur when educational leaders are able to implement innovations “that result in an enhanced environment for student and teaching learning” (Swygert, 2004, p. 2). School leaders, therefore, are constantly seeking innovations intended to improve student performance. Data-driven school improvement emphasizes the need to design and implement programs and practices that result in measurable student learning (Gregory & Kuzmich, 2004; Johnson, 1997). Today, more than ever, teachers and principals are focusing on the core technology of teaching and learning in order to influence schools’ instructional capacity (e.g., Blase & Blase, 2000; Darling-Hammond, 1998; Little, 1982; Pajak & Glickman, 1989).

Because leadership for school improvement is now becoming essential for future principals, educational leadership preparation programs must adequately prepare administrators for this important role. Such demands, however, raise two fundamental questions: (a) How do preparation programs affect graduates’ professional workplace practices; and (b) Do these practices result in schools that are more effective for staff and students? Clearly, determining these types of effects on graduates and their school organizations is no easy task. According to Browne-Ferrigno and Muth (2003):

Measuring transference of cohort-based learning to professional practice in school leadership can be difficult, and it surely will be labor-intensive, costly, and time-consuming. Nonetheless, accountability for the effectiveness of professional development programs requires better data than passing rates on exams, career-placement results, or anecdotal data from graduates and faculty. Short-term and longitudinal studies are needed to trace and examine the transference of students’ learning in cohorts

to practice settings and to graduate’s professional practices as educational leaders (p. 634).

Given the importance of preparing administrators who can lead school improvement efforts, the purpose of this article is to explore ways in which the knowledge and skills about leadership for school improvement obtained in preparation programs can be transferred to the workplace. Although I do not promise definitive answers to this complex issue, I will begin by examining the concept of transfer, particularly the factors influencing successful transfer. I then outline the specific challenges educators face when attempting to assist aspiring school leaders to apply ideas and lessons learned to the workplace. Promising strategies for promoting transfer are identified before concluding with some final implications for educational leadership preparation programs.

Learning Transfer

Learning transfer is not a new idea. Ancient philosophers and religious scholars constantly sought to understand how individuals connect their knowledge with their social context (Beach, 1999). In today’s educational settings, many of the instructional strategies we employ are based on these early principles of transfer. For instance, vocational education, basic skills instruction, critical thinking, and problem-based learning are intended to assist students to apply knowledge gained in one setting to another context (Beach, 1999; Bridges, 1992; Hunter, 1971). As noted earlier, many of today’s educational institutions, particularly K-12 public schools, are facing unprecedented pressure for reform. In many instances, districts and schools are being pressured by the public, particularly politicians and local community leaders, to improve student performance. As a result, educators are being urged, and sometimes forced, to employ new teaching and assessment methods that have been used in other settings. Therefore, to better understand the concept of learning transfer, I examine the importance placed on this learning concept and the major factors that influence the transfer process.

Importance of Transfer

Caffarella (2002) identifies several underlying reasons why transfer has captured the public’s attention, which have strong implications for educators. First, most employers want to know that their investment of human and financial resources in training and development programs are affecting employees’ performance and the organization’s productivity. Second, as communities struggle with mounting social problems resulting from poverty, violence, and substance abuse, civic leaders are constantly searching for programs and practices that will affect social agencies and the lives of community members. Finally, the rapid pace of life in our modern society, fueled by the knowledge explosion, constantly forces individuals to adapt their lifestyles and challenges them to absorb and apply new information.

Despite educators’ and the public’s desire to transfer knowledge and behavior from one context to another, there is little empirical evidence that learning transfer exists:

Most studies fail to find transfer... [T]hose studies claiming transfer can only be said to have found transfer by the most generous of criteria and would not meet the classical definition of transfer. ... In short, from studies that claim to show transfer and don’t show transfer, there is no evidence to contradict Thorndike’s general conclusions: Transfer is rare, and its likelihood of occurrence is directly related to the similarity between two situations. (Detterman & Sternberg, 1993, p. 15)

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If this dearth of evidence is true, what accounts for the lack of success in transferring knowledge and behavior from one setting to another? Later in the article, I will describe promising learning transfer strategies; however, I first turn to some of the underlying factors that educators must account for when attempting to establish transfer.

What Influences Transfer?

To understand what influences transfer, Marini and Genereux (1995) identify three important factors:

At one time or another the importance of each basic element of transfer—*task, learner, and context*—has been emphasized by educational theorists. Given that each element plays a key role in the transfer process, taking all three into account when designing instruction is most advisable. (emphasis added, p. 5)

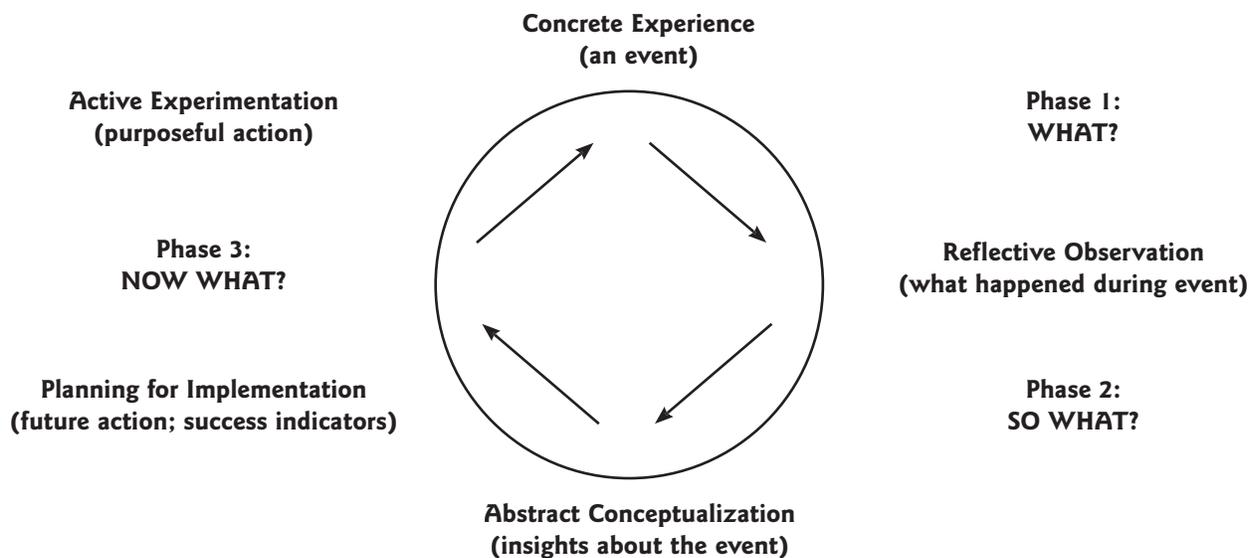
Transfer is about changing behavior in a new context. Therefore, as Marini and Genereux (1995) suggest, educators invested in transfer must understand the: (a) actions that are being transferred (task); (b) individual's ability to cope with change (learner); and (c) social and organizational dynamics of the setting (context). Each of these topics will be explored below.

Features of the task. The specific tasks or actions that are to be performed in a new setting must be considered when teaching for transfer. Understanding how an innovation is diffused or spread throughout an organization provides insights about the features of the task. Rogers (1983), for instance, identified the following features as being critical to adopting an innovation: relative advantage; compatibility; observability; trialability; and complexity. In other words, if the innovation (task) is not seen to benefit individuals or the organization, is extremely complicated to implement, and is difficult to see in practice, then the likelihood of implementation is greatly reduced. Another strong factor in transfer is the similarity of the task demands between the learning situation and the work setting (Detterman & Sternberg, 1993; Hunter, 1971). The more similar the tasks in these two settings, the greater the possibility that transfer will occur. Therefore, astute instructors and program planners must consider the features of the task or innovation when developing learning activities that are intended to replicate this same task in the workplace (Caffarella, 2002).

Features of the learner. The manner in which individuals cope with innovations can greatly affect how they transfer new information and skills to the workplace. Clearly, previous history with change influences individuals' willingness to apply their learning in new situations (Caffarella, 2002). As Hall and Hord (1987, 2001) have discovered, individuals experience a series of concerns when dealing with change. *Self concerns* emerge as individuals question their knowledge about or capacity to put new ideas into practice. As they overcome these initial trepidations, *management concerns* arise as individuals begin to struggle with implementing new ideas for the first time. In the early stages of their implementation, these novel approaches feel awkward and unnatural; however, with practice and ongoing support, management concerns tend to fade. Finally, as individuals become comfortable with the innovation, they experience *impact concerns*, where attention is given to how the innovation influences other people and how it might be adapted for greater impact in the future.

One of the critical aspects of assisting educators to cope with change is to provide them with opportunities to reflect on their concerns in order to reveal underlying biases, values, and past practices that may assist or impede with learning transfer. In helping educational practitioners improve their reflective habits, David Kolb's (1984) experiential learning theory is a useful means of conceptualizing reflection. In their work with educators, Barnett, O'Mahony, and Matthews (2004) have slightly revised Kolb's original model to make it more "user friendly" for educators and to capture the reflective process in three distinct phases: "What? So What? Now What?" Figure 1 shows the interrelated phases of the three-step reflective process. First, when recounting an event (concrete experience, reflective observation), the question, "What occurred prior to and during this event?" is being addressed (Phase 1: What?). Next, when seeking to understand the underlying reasons why the event occurred (abstract conceptualization), the question, "What have I learned about this event?" is being posed (Phase 2: So What?). Finally, to anticipate how to use what has been learned in the future (planning for implementation, active experimentation), the question, "Based on what I've learned, what am I going to do similarly or differently?" is answered (Phase 3: Now What?).

Figure 1
Model of Reflective Thought and Action



Learning transfer begins to surface at the intersection of Phases 2 and 3. In order to encourage critical thinking and purposeful action, reflective practitioners must anticipate the possible consequences, outcomes, and results of their actions prior to encountering future events. These insights allow them to express self and management concerns prior to attempting to transfer the innovation to the workplace. As the innovation is practiced during the active experimentation phase, further reflection can reveal ways in which the new practices or information is working as anticipated. If it is not meeting some of the anticipated outcomes identified in the planning for implementation phase, then appropriate adjustments can be made.

Features of the organization and social context. In addition to the task being transferred and how individuals cope with change, organizational and social factors can influence transfer. The organization's previous history with change, particularly events that have thwarted or supported new initiatives, can affect attempts to transfer new practices and programs to the workplace (Caffarella, 2002). Two important organizational conditions significantly influence learning transfer. First, *internal conditions*, particularly human, material, and symbolic support, are critical if an innovation is to be successfully implemented (Berman & McLaughlin, 1976). Collegial support and interest is perhaps the most essential internal condition for fostering change and innovation (Fleisher, 1985). Second, economic, social, and political factors are critical *external conditions* that can affect the implementation of new practices, policies, and programs in organizations (Berman & McLaughlin, 1976; Caffarella, 2002). Notable examples reveal the effect of these external conditions, such changes in federal regulations and policies (White, 1990) and reductions in funding (Achilles, 1994) on the continuation of new programs.

Challenges of Transfer for Educational Leadership Programs

Increasingly, educational leadership preparation programs are coming under attack regarding their purported effects on administrators' workplace practices (e.g., Brent & Haller, 1998). Given the background on learning transfer summarized earlier, what do we know about the realities and challenges university leadership preparation programs face as they assist future school leaders to transfer skills and information to the workplace? This central question will be explored in this section of the article. First, I briefly describe existing evidence of learning transfer in educational leadership preparation programs. Second, I focus on examples of task, learner, and contextual factors that can impede the transfer of learning communities from preparation programs to the workplace.

Do Leadership Programs Impact Workplace Performance?

Recent attempts have been made by practitioners and researchers to discover how leadership preparation impacts principals and student performance. Perceptions of many program graduates is not positive, indicating they did not believe their programs had much or any influence on their subsequent knowledge and performance (Achilles, 1994; Goldman & Kempner, 1988; Schnur, 1989). Although few empirical studies of the impact of educational leadership programs exist (Brent & Haller, 1998), what has surfaced confirms many graduates' perceptions:

Graduate training in educational administration has no significant positive influence on school effectiveness... If graduate training in school administration improves competence, then the principals of effective schools should, on average, be more highly trained than principals of less effective schools. This is not what we

found. (Brent, 1998, p. 6)

Despite these discouraging findings, there is some recent evidence that preparation and professional development programs influence what occurs in the workplace. Herbert and Reynolds (1998), for instance, have discovered that learning-transfer outcomes are slightly higher when graduate students participate in cohort-based preparation programs. Furthermore, in a recent longitudinal study examining the effects of a professional development program for principals, referred to as the School Leadership Center (SLC), Leithwood, Riedlinger, Bauer, and Jantzi (2003) report that participants' quality of leadership increased, leadership practices were related to student achievement gains, and school conditions improved. The authors concluded:

The external evaluation design does not allow us to attribute the gains we have reported to the SLC program alone... Nonetheless, our comparisons of achievement gains in SLC schools with gains in other comparable schools in the state [demonstrate]... SLC programs seem to be adding significant value to the many other initiatives occupying attention of schools across the state. Of more general significance, our evaluation provides rare empirical support for the claim that well-designed leadership development programs are capable of enhancing student learning. (p. 730)

Other anecdotal evidence suggests that leadership preparation, particularly cohort experiences, has effects on aspiring school leaders. Various social or interpersonal benefits are afforded to cohort students, including community building, conflict resolution, cohesiveness, interdependence, and collaboration (e.g., Geltner, 1994; Norris & Barnett, 1994; Milstein & Krueger, 1997; Reynolds, 1993). Many students and their professors concur the cohort experience can have a lasting influence on learning, noting that interpersonal relationships and professional contacts persist following program completion (Barnett, Basom, Yerkes & Norris, 2000; Browne-Ferrigno, Barnett, & Muth, 2003; Hill, 1995; Milstein & Associates, 1993; Milstein & Krueger, 1993; Norton, 1995). While some evidence exists to substantiate academic learning effects, including completion rates in programs (Dorn, Papalewis & Brown, 1995; Reynolds & Herbert, 1995) and learning achievement (Herbert & Reynolds, 1998), "the preponderance of evidence points to affective learning outcomes rather than cognitive ones" (Donaldson & Scribner, 2003, p. 645).

Challenges of Transfer

Thus far, this article suggests there is much to learn about how preparation programs can assist aspiring school leaders to apply new skills and information to their workplace settings. There are particular challenges when attempting to transfer the knowledge and skills obtained in preparation programs to the workplace. These challenges reflect my earlier explanation of the need to understand how the task, learner, and context intersect when attempting to transfer learning from one situation to another. The dilemmas associated with learning community transfer include:

1. Transfer requires the involvement of large numbers of people; yet an individual often is asked to apply preparation program concepts to the workplace (context/learner dilemma).
2. Many internal and external forces are beyond the control of an individual person, especially one who has little or no experience as a school leader (context/learner dilemma).
3. Many innovations, such as school improvement initiatives, are extremely complex and multifaceted, making them difficult to replicate in schools (context/task dilemma).

4. Many differences exist between the original learning situation of the cohort and the school where learning transfer is to occur (context/task dilemma).

Each of these dilemmas will be examined below.

Individual and group application (context/learner dilemma). As Starratt (1995) notes, school-based innovations depend on the collective efforts of members of the organization, rather than on the actions of a single individual. The dilemma for preparation program participants is how to engage members of their own school organizations in an innovation. In most instances, individual teachers enroll in preparation programs, rather than a team or critical mass from the school. Furthermore, graduate students typically are teachers who lack the authority to lead their schools in large-scale innovations. Often, when they do obtain positions of authority, it may have been many years since they participated in the preparation program. As a result, the original program learning can be inadequate for meaningful transfer to occur (Bransford & Swartz, 1999; Lee, 1998; Lee & Pennington, 1993).

Little control over internal and external forces (context/learner dilemma). Another difficulty in transferring knowledge and skills to the workplace is that external forces as well as internal factors can impede the implementation of the innovation (Deal & Peterson, 1999). For instance, if the current school culture encourages unhealthy competition, cliques, and divisiveness, then a complete overhaul of the culture will be needed in order to establish the levels of trust and collaboration necessary for an innovation such as school improvement to thrive. Knowing the difficulties in changing culture, making such sweeping changes can be a daunting task, which can take many years to achieve (Deal & Peterson, 1999; Fullan, 1993; Schein, 1992).

A complicating factor is that most students enrolled in educational leadership graduate programs are teachers who lack the power and authority to deal with these internal and external forces. Typically, individuals make the commitment to return to graduate school without the formal sanction and support of the district or their school. Although school-university partnership programs are being established to create a tighter link between preparation and district needs (e.g., Whitaker & Barnett, 1999), there usually is little or no commitment of the program participants' principals and teacher colleagues to incorporate ideas raised during the preparation program. Not until graduates become formal leaders (which may be many years following completion of the program) will they be in positions of authority to shape the internal and external conditions necessary for innovations to flourish.

Complexity of the innovation (context/task dilemma). Establishing and maintaining school improvement programs is not a simple, straightforward matter. As I have noted, it takes the collective and sustained efforts of many people, not just school leaders. Because of the complex nature of school improvement, transfer can be extremely difficult. As Rogers (1983) notes, the less compatible the innovation is with current practices, the less visible it is to members of the organization, and the more complicated it is, the more difficult it is to implement the innovation. The complexity of school improvement, coupled with internal and external forces that may impede the innovation from flourishing, pose a difficult challenge for leadership preparation programs that strive to help their students learn about and establish this complicated innovation in the workplace.

Program and workplace differences (context/task dilemma). A final dilemma affecting transfer from preparation to the workplace is the dissimilarity between these two contexts. One of the important principles of transfer is that the more similar the two situations, the

greater chance that transfer will occur (Detterman & Sternberg, 1993; Hunter, 1971). As mentioned, there are many differences between a graduate preparation program and a school organization. The most notable is that individual teachers attend graduate school; yet school improvement needs to be embraced by large groups of people in the organization. There are other structural and contextual differences between school organizations and graduate students' preparation programs:

- Graduate students typically meet for substantial time periods (e.g., retreats, weekend sessions, 3-4 hour time weekly time blocks) over the course of one to two years. Members of a school organization rarely engage in such sustained and intense professional development activities. Because teachers tend to be segregated from one another, teach different students, and are responsible for different subject matter (particularly in middle and secondary schools), the task demands of the job tend to minimize chances for collective interaction (Little & McLaughlin, 1993).
- Many graduate students remain as an intact group for most, if not all, of their preparation program; however, schools are dynamic organizations where administrators and teachers are hired and leave quite frequently. Only when new schools are opened, does a faculty and an administrative staff begin at the same time.
- Typically, graduate students are interested in expanding their knowledge and skills about leadership whereas schools are places of employment. Individually, graduate students make a choice to attend a particular preparation program, whereas teachers do not always have control over where or what subjects they teach. Not only must teachers adhere to certain governance structures, policies, and procedure, but they also are evaluated by school administrators, which has bearing on their continued employment. Although graduate students are evaluated by their professors, the stakes are rarely as high since few graduate students are forced to terminate their preparation programs (Dorn, Papalewis & Brown, 1995).
- Graduate classes usually are much smaller than school organizations. Enrollment tends to be less than 25 students per course; however, school organizations, especially secondary schools, are much larger. When adding students, parents, and community members into the school population, schools become much larger and more complex organizations than graduate classes or programs.

Besides these specific dilemmas associated with learning transfer effects, Leithwood et al. (2003) describe three additional challenges of conducting the types of longitudinal studies envisioned by Browne-Ferrigno and Muth (2003) to uncover transference:

1. *Conceptual challenges* result when attempting to establish direct links between principals' actions and student learning outcomes.
2. *Technical challenges* arise because schools do not always use reliable and consistent measures of student achievement, and locating the same types of schools for comparisons can be problematic.
3. *Relationship challenges* surface when program developers become defensive about and do not trust the formative and summative data they receive regarding how the program is or is not affecting participants and their schools.

Thus far, my argument suggests that it is not feasible for educational leadership programs to be able to assist graduate students to transfer the skills and knowledge necessary for future leaders to establish and maintain innovations in their schools. While the learner, task, and contextual conditions mentioned above raise concerns, I believe there are some ways university preparation programs can directly confront these challenges. One possible approach is to establish school-university partnership programs that not only recruit and identify highly-qualified candidates, but also develop mutually-agreed upon content and expectations for student performance (Erlandson, Skrla, Westbrook, Hornback & Mindiz-Melton, 1999; Fussarelli & Smith, 1999; Whitaker & Barnett, 1999). These types of partnerships will take time to develop (Trubowitz, 1986) and will require more interdependent organizational arrangements among the partners (Barnett, Hall, Berg & Camarena, 1999); however, as trust and interorganizational collaboration develop, the likelihood of creating the conditions necessary for learning transfer will increase. Besides partnerships, which will require organizational commitment from all the partners, what are other promising strategies that preparation programs can use to begin to promote the positive learning transfer to the workplace? I now turn attention to answering this important question.

Strategies for Transfer

Faculty who are interested in transfer need to understand what they can and cannot control as their students attempt to apply learning from one situation to another. They have greater influence over the content and program design than the organizational and social context where these innovations are intended to be implemented (Caffarella, 2002). A distinction has been made between two types of transfer: "high road" and "low road" (Perkins & Salomon, 1987). *High-road* transfer requires learners to discover underlying principles and then determine how to apply them in practice. In short, learners must make the effort to discover similarities and differences in the training and workplace contexts when transferring knowledge and skills. *Low-road transfer*, on the other hand, is a more deliberate process where learners practice skills that are similar to other contexts; over time they expand these skills by attempting to apply them to different workplace contexts. Taking these types of transfer into account, this section will summarize a conceptual framework for transfer developed by Caffarella (2002), including activities that can enhance transfer, and describe ways to assess whether the information being transferred is affecting individuals and their organizations.

Conceptual Framework for Transfer

Caffarella's (2002) transfer framework identifies the important factors that faculty can attend to when assisting graduate students to transfer information from the university's instructional setting to their school settings. Her three-part framework is comprised of: (a) the timing of transfer activities; (b) the selection of appropriate transfer activities; and (c) the individuals responsible to ensure transfer occurs. I will examine each of these features of the framework.

Timing. There are a variety of times when transfer can be seriously attended to by faculty, including before, during, or following the completion of a leadership preparation program. For example, when using school-university partnerships, a significant amount of preplanning occurs before these programs are implemented (Erlandson et al., 1999). Decisions about recruitment and selection, program design and delivery, learning outcomes, and individuals responsible for overseeing and delivering the program must be made. One way that

partnerships have attempted to deal with these preplanning issues is to create a steering committee comprised of members from the school districts and university (Whitaker & Barnett, 1999). In addition, as the preparation program unfolds, strategies can be employed to connect course content with practices in school settings. One approach for doing this is to alert field-based mentors of the content being delivered in the program at various points in time. Then mentors can provide learning experiences for students that relate to their university coursework, such as budgeting, staff evaluations, staffing, and curriculum planning. Finally, attention to transfer can occur after completing the program; however, rarely do faculty continue to work with graduates in a concentrated and systematic way. One approach for staying connected with graduates is for universities to play a role in the induction programs that many school districts are now utilizing for novice school administrators.

Selection of activities. Earlier I noted the importance of using reflection as a means for assisting learners to make sense of new ideas and how they might be applied in their settings. There are numerous accounts of how individual and group reflection activities can facilitate transfer (Barnett & O'Mahony, 2002; Caffarella, 2002; Daudelin, 1996; Hole & McEntee, 1999). Barnett, O'Mahony and Matthews (2004) have identified some of the promising approaches for developing reflection that are available to faculty (see Table 1). They describe four major categories of activities used to encourage professionals' reflective thinking: (a) recounting past experiences; (b) reviewing other peoples' experiences; (c) practicing skills; and (d) integrating theory and practice. When *recalling past experiences*, individuals prepare written exercises and discuss these events with others. Common examples of written exercises include autobiographies, inventories, and journals. Group discussions and critical incident protocols are ways of verbally engaging colleagues in reflection. Carefully selected questions and prompts can facilitate written and oral discussions. For instance, Canning (1991) suggests educators: (a) write about personally important matters; (b) find their voice by defining their personal position; (c) look for compatible and conflicting knowledge; and (d) acknowledge how reflection is working and areas where they continue to struggle. In addition, the "What? So what? Now what?" questions suggested by Barnett, O'Mahony, & Matthews (2004) encourage reflection at different levels or phases. Finally, guided reflection protocols (for individual reflection) and critical incident protocols (for shared reflection) use a series of prompts that focus on the phases of reflection--What happened? Why did it happen? What might it mean? What are the implications for my practice? (Hole & McEntee, 1999).

Besides recounting personal experiences, reflection can be promoted by *examining current and former experiences of other people*. These events can be directly observed and processed using visitation journals and reflective interviews or indirectly explored using case studies of real or fictitious situations. A third way of engaging in reflection is by *practicing skills and receiving feedback on performance*. This feedback can come from another person who has observed an individual's actions (e.g., peer coaching, reflective interviewing) or through data collected at the school level using action research methods. Finally, *connecting theory and practice* not only is a good way to be exposed to new perspectives and concepts, but also allows individuals to compare these perspectives with their workplace practices.

When introducing these reflective activities, instructors should be attentive to the three phases of reflection described earlier (see Figure 1). Learners not only should review the context influencing

Table 1
Examples of Instructional Processes Fostering Reflection

Category	Examples
1. Recounting past experiences <ul style="list-style-type: none"> • Individual preparation • Collective discussion 	Autobiographies Reflective journals and case records Case stories Educational platforms Self-inventories Guided reflection protocols Critical incident protocols Group discussions
2. Reviewing other people's experiences <ul style="list-style-type: none"> • Direct observation • Indirect observation 	Observation of experts Visitation journals Shadowing and reflective interviewing Case studies
3. Practicing skills	Problem solving Action research Peer coaching Microteaching and supervised practicum
4. Integrating theory and practice	Learning style inventories Leadership style inventories Reflective writing exercises

Source: Adapted from B.G. Barnett, G.R. O'Mahony & R.J. Matthews. (2004). *Reflective practice: The cornerstone for school improvement*. Victoria, Australia: Hawker Brownlow Education.

the event (Phase 1: What?) and determine the underlying reasons for what transpired (Phase 2: So what?), but also should identify personal insights that can be applied in their own school settings (Phase 3: Now what?). By forcing learners to examine how their current school practices and culture enhance or impede transfer, they will be better able to cope with potential problems and take advantage of positive conditions when applying new practices in the workplace.

Furthermore, instructors need to be aware of how the learning environment affects reflection. For instance, a learner-centered climate, one where ongoing collaboration and strong interpersonal relationships develop between the instructors and the learners, is critical for adult learning (e.g., Norris, Barnett, Basom, & Yerkes, 2002; Panasuk & Lebaron, 1999). Barnett, O'Mahony, and Matthews (2004) list additional features that promote a reflective learning environment:

- Provide emotional support (Berkey, Curtis, Minnick, Zietlow, Campbell, & Kirschner, 1990; Caffarella, 2002).
- Encourage risk-taking and trust by honoring confidentiality, maintaining a nonjudgmental stance, and allowing various perspectives and dissenting viewpoints to be voiced (Berkey et al., 1990; Lee & Barnett, 1994; Norris et al., 2002; Ross, 1989).

- Focus on relevant educational issues, such as student learning, school improvement, and effective teaching (Barnett & O'Mahony, 2002; Berkey et al., 1990; Hannay, 1994).
- Gradually increase the difficulty of problem-solving tasks (Leithwood & Steinbach, 1992).
- Provide constant feedback on performance (Leithwood & Steinbach, 1992; Panasuk & Lebaron, 1999; Ross, 1989).
- Devote adequate time for practicing reflection (Berkey et al., 1990).
- Combine written and oral reflective learning activities as well as individual and collective exercises (Barnett & O'Mahony, 2002; Berkey et al., 1990; Hole & McEntee, 1999; Norris et al., 2002).
- Ensure the size of learning groups allows for individual growth and development (Norris et al., 2002).
- Offer follow-up activities to support implementation (Barnett & O'Mahony, 2002).

Who oversees transfer. Up to this point, it might appear that the individual learner or graduate student is primarily responsible for successful learning transfer to occur. However, I concur with Norris et al (2002):

A variety of people are needed to ensure that the seeds of transfer have a chance of sprouting. Clear expectations about the roles and responsibilities of these people can be communicated from the very beginning of the leadership preparation program. (p. 123)
 Besides graduate students, other key stakeholder need to be involved, including the university faculty who design and deliver the curriculum, clinical faculty involved in supervising field-based activities, mentors who oversee students' internships activities, and school district officials. Although having support from district officials and school board members is important for partnerships to thrive (Melville, Blank & Asayesh, 1993), the bulk of the responsibility will be shared by instructors, students, and field-based mentors. In addition, the steering committee can provide guidance and direction regarding how information from the preparation program can be applied in school

settings; however, those individuals actually designing and delivering the program must be attentive to transfer (Hannay, 1994).

Impact of Transfer

To determine if transfer is successful, a fundamental question needs to be addressed: How would I know if new ideas and information are being transferred to the workplace? This question has been raised by Guskey (2000) and others, especially in determining the degree to which professional development activities impact educators' practices and the performance of their students. A common complaint of professional development is that these types of activities lack meaning, are piecemeal, and have little impact on performance. Therefore, Guskey (2000) maintains that if teachers and administrators are to embrace professional development, then programs must: (a) be clearly focused on learning and learners; (b) emphasize individual and organizational change; (c) introduce small changes and be guided by a grand vision; and (d) be ongoing and embedded in their work. Other features of effective professional development that affect learning transfer include

Table 2
Reflective Questions and data Gathering Techniques for Evaluating Professional Development
(Adapted from Guskey, 2000)

Evaluation Level	Reflective Questions	Ways to Gather Information
Level 1: Participants' Reactions	Did the content make sense? Was your time well spent? Was the instructor prepared and knowledgeable? What are your reactions to the instructional activities? Was the room arrangement conducive to your learning?	Questionnaires Focus groups Interviews Journals
Level 2: Participants' Learning	Were the learning objectives for the session(s) achieved? What did you learn today? What else do you need to learn about this topic? How do you intend to apply information? What facilitated or impeded your learning?	Simulations and demonstrations Participants' oral and written reflections Case studies Participant portfolios
Level 3: Organization Support and Change	What policies affect our implementation? Has adequate time been provided for implementing our goals? How are you supported when trying new ideas? Do central office administrators know about and support your efforts? Are results of new practices being shared with others?	District and school records Written policies Focus groups Interviews with participants and administrators Questionnaires
Level 4: Participants' Use of New Knowledge and Skills	How will we know if new skills are being practiced? What will be observed if effective implementation is occurring? What new knowledge are you putting into practice? What problems are you having with the implementation? What insights are you sharing with teachers and administrators?	Questionnaires Oral and written reflections Teacher portfolios Direct observation Video and audiotapes Interviews with participants and supervisors
Level 5: Student Learning Outcomes	How has the implementation affected student achievement? How has the implementation affected student attitudes? Have all students acquired the desired learning outcomes? Are learning outcomes the same for students from different ethnic backgrounds or gender? How are students doing on standardized tests?	Standardized test results Questionnaires Interviews with students, teachers, parents Student portfolios

Source: Adapted from T.R. Guskey. (2000). *Evaluating professional development*. Thousand Oaks, CA: Corwin Press.

allowing teachers to immerse themselves in subject matter and teaching methods, focus on curriculum and standards, and connect the content to classroom instruction (Mahon, 2003).

Returning to the question--How would we know if new ideas and information are being transferred to the workplace?--Guskey (2000) provides a useful framework for determining five potential levels of impact professional development. (The study of the SLC by Leithwood and colleagues (2003) is a particularly good illustration of a research design utilizing this framework.) These levels, representative reflective questions, and ways of gathering evaluation data are summarized in Table 2. The five levels of reflection, each one gaining greater depth about the impact of the professional development experience, are:

- *Participants' reactions* (level 1)--focuses on personal reactions to the professional development experience (asked at the conclusion of a session).
- *Participants' learning* (level 2)--examines perceptions of what was learned as a result of the experience (asked at the conclusion of a session).
- *Organization support and change* (level 3)--reveals how the school's current policies and practices support or inhibit the proposed goals of the experience (asked soon after the session).
- *Participants' use of new knowledge and skills* (level 4)--explores how the ideas generated from the experience are being applied (asked at different times throughout the school year).
- *Student learning outcomes* (level 5)--assesses how student learning has been affected by the experience (asked at different times throughout the school year).

As can be seen in Table 2, level 1 questions determine whether the participants enjoyed the professional development experience and believed it was worth their time. Using questionnaires and/or open-ended questions, most session organizers tend to obtain this level of information regarding participants' perceptions about the activities and delivery. One way to ascertain participants' level 1 reactions is to ask: (a) What are you glad we did today; and (b) What do you wish had happened? Another approach is to ask participants to discuss their responses to the prompts: "Learned? Affirmed? Challenged?" (York-Barr, Sommers, Ghore & Montie, 2001). If organizers are interested in immediately determining what participants feel they have learned from the professional development experience (level 2), they can use similar written and verbal activities from Table 2. Many educators have become disillusioned by professional development since it tends to be forgotten once the workshop is finished. To keep professional development alive, teachers and administrators can commit to using the types of data-gathering activities and questions summarized in Table 2. Doing so is a proactive way to "drill deeper" to ascertain the effects of professional development. As data are gathered at levels 3, 4, and 5, action research can be used to determine ways in which practices are transferring into the school by examining how teachers and students have been affected by the school's professional development efforts (e.g., Sagor, 2000; Stringer, 1999).

Conclusions and Implications

One of the espoused benefits of educational leadership preparation programs is to develop graduate students' capabilities to make a difference in their school settings. Cohort-based programs, problem-based learning, intensive internships, and other learning structures and activities appear to hold great promise for leadership preparation; however, "the challenge of graduate educational leadership preparation programs lies in the capability of these programs to help aspiring

leaders transfer what they learn ... into their school settings" (Norris et al., 2002, p. 126). Perhaps the true legacy of leadership preparation programs is whether the knowledge and skills can be transported to school organizations, especially ones dedicated to improving the learning outcomes for all students.

While many scholars and practitioners espouse the need for school improvement, we lack substantive evidence of how these types of learning environments are created and maintained. There are, however, a variety of areas worth pursuing to understand how the transfer of leadership for school improvement occurs. On one hand, I have argued throughout this article that there are important task, learner, and context learning transfer activities that can influence leadership for school improvement (Marini & Genereux, 1995). On the other hand, I need to learn far more about the realities of school improvement and how aspiring, novice, and experienced school leaders can affect K-12 students' learning. Increasing our knowledge about school improvement is critical if we are to contribute to the debate about how school leaders, especially superintendents and principals, influence student performance (e.g., Petersen & Barnett, forthcoming).

Nevertheless, if educational leadership faculty and practitioners are to truly understand how to assist in transferring what is learned in preparation programs to the workplace, then I need much more clarity about what school improvement entails and how these efforts are affected by a variety of factors. Therefore, using guiding principles of change and innovation (e.g., Berman & McLaughlin, 1976; Hall & Hord, 1987, 2001; Rogers, 1983), I outline below several areas worth pursuing to better understand school improvement and its transference:

1. *Qualities of school improvement.* How is school improvement defined? How is school improvement measured and/or observed in practice? What aspects of school improvement are elusive and difficult to observe? How does school improvement evolve over time?
2. *Internal factors affecting school improvement transfer.* What features of the culture enhance and impede school improvement initiatives? How does the arrival and departure of new faculty and administrators affect school improvement? How do new members of the school become acculturated to existing school improvement efforts? Can school improvement exist without the support of school administrators?
3. *External factors affecting school improvement transfer.* How does the social, political, and economic climate affect school improvement? What local, state, and national policies support or erode school improvement? How does increased competition and high stakes testing influence school improvement?
4. *Impact of school improvement.* How does school improvement affect student learning? What concerns arise when establishing and sustaining school improvement initiatives? What experiences and dispositions are important for members of the school to embrace school improvement?

Answering these questions will assist university faculty and practitioners in learning more about the transference from preparation programs to the workplace. If public schools are to overcome many of the persistent problems they are experiencing, such as violence and crime, student and teacher apathy, and lack of connection with their communities, answers to these questions demand school leaders' attention. As our understanding of the complexities associated with transferring knowledge and skills from the classroom to the workplace increases, schools stand a far better chance of developing learning

environments where teachers, administrators, and community members collectively participate in continuous learning and improvement, resulting in instructional improvements and student learning (Fullan, 2000; Newmann & Wehlage, 1995; York-Barr et al., 2001). When educational leadership preparation successfully addresses transference issues, their relevance and credibility will rise, resulting in greater political and educational value--what better way to demonstrate our value to the profession and our legacy to school improvement?

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