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*Student learning and student development are part of a unified framework rather than separate interests to be pursued independently.*

## Taking Seriously the Intellectual Growth of Students: Accommodations for Self-Authorship

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Self-authorship is proposed as a developmental goal fundamental to successful adaptation in the world of the twenty-first century (Baxter Magolda, 2004). Cast in educational terms, the basic premise is that schools serve not only to keep and convey knowledge, but also to provide those special assistive conditions that can nudge minds to life. This assertion of new roles for schools is a natural progression of the growing body of research showing how education can shape development, but also how epistemological development is essential for effective learning. As this reciprocal relationship—this more complex story line about student learning—becomes increasingly clarified, schools will face increasing pressure to respond. We now know with much greater clarity that sound education requires bringing the student along for the journey. The argument for taking intellectual development seriously can be thought of as protecting the massive investment already being made in traditional approaches to education.

This chapter considers the challenges that higher education faces in taking up this expanded obligation. I discuss two main assertions that seem particularly important for future progress. The first is that real understanding of students' progression in education will remain fragmented until we can bring together, within a common framework, theories of learning, development, and instruction. Understanding how people learn, how the intellect changes

over time, and how to effectively design and implement a course or curriculum is not the same as knowing how knowledge in each of these areas can work together.

The second assertion concerns how we put new knowledge about student learning and development to work. Unless we can envision more effective change processes for faculty and administrators—that is, support their own learning and development—the best prediction we can make about students becoming cognitively mature and secure in their identities and relationships is that they will have to continue working it out largely on their own. In a sense, the shape and pace of their development is dependent on the shape and pace of our development.

Both assertions deserve careful elaboration, which I approach based on two perspectives. First, as an educational psychologist, I have spent many years attempting to put teachers, or prospective teachers, in touch with research on learning in ways that are meaningful and potentially useful. This movement of ideas from research frameworks to practice environments is never easy, and there is much we still need to learn. Second, and even more pertinent to this discussion, is my role and work during the past ten years as director of a university teaching center. One of our longest-running projects during those years has been a collaborative effort with Marcia Baxter Magolda to integrate student development concepts into our thinking about undergraduate education at Virginia Tech (Wildman, 2004). One outcome of this broader project is the two-year integrated curriculum discussed in Chapter Five in this volume by Barbara Bekken and Joan Marie, in which the concept of self-authorship plays a central role. What is not fully explained in the description is an entire subplot, which essentially is about how they managed to pull off the work they have accomplished given the considerable odds against success. A good deal of that story relates to the need for a better understanding of how learning and developmental concepts come together in new instructional models and how people can learn to implement these new practices.

There is some good news about my two assertions and also some cautionary elements to consider. The good news is that much work has already been done to explain the connections between research on adult intellectual development and instructional practices that support such development. The persistent and enlightening work of Baxter Magolda (1992, 1999b) and others in carrying forward and expanding Robert Kegan's notion (1994) of self-authoring, and in particular the articulation of concrete principles of instructional engagement using the Learning Partnerships Model (LPM; Baxter Magolda and King, 2004), truly does provide the elements of a road map for educational change. Furthermore, some preliminary tests of this new road map are producing promising results for students (see Chapters Five and Six, this volume).

Nevertheless, the cautions we need to keep in mind are perhaps as important for future progress as is the available good news. First, the inevitable progress we will see in better coordinating research related to

development, learning, and instruction is going to produce additional complexity for practitioners. In higher education, we are accustomed to working with basic and predictable goal structures related to student outcomes, usually expressed in terms of knowledge and skill acquisition. The transmission or dissemination models typically used to convey knowledge allow faculty members to enact a relatively safe technical practice, drawing as necessary from research and theory (behavioral and cognitive) showing how knowledge and skill development best proceeds. The addition of student development goals to the mix creates levels of uncertainty and instability that essentially require a reframing of what it means to engage in professional instructional practice. Faculty members will now be thrust into a reflective mode that is inventive in nature, decidedly nontechnical, and ultimately disruptive to the bureaucratic systems that were designed to nurture the standard technical practice. Educators who decide to take student intellectual development seriously, even with the guidance of good advice such as provided with Baxter Magolda's learning partnerships framework, will be thrust into the dual mode of adjusting their own teaching behavior while seriously negotiating institutional requirements that were likely not put in place with the idea of students taking charge of their own education. These complicating conditions may explain why successful implementations to date are so often pilot projects or initiatives located in contexts such as graduate schools, honors programs, especially cohesive academic departments, or other special contexts that tend not to threaten the mainline instructional delivery machinery in our institutions.

When we speak of taking the intellectual growth of students seriously, I believe we are talking about mainstream education, and not simply demonstration projects that live on borrowed time, uncertain resources, and the extraordinary efforts of a few pioneers. To accomplish this broader impact, we will need to reframe what we mean by learning and instruction, find ways to learn and live with increasingly nontechnical instructional practices, and remove institutional barriers. The importance of a new storyline—a new script for negotiating learning in schools—cannot be overemphasized. Interventions that run counter to cultural expectations tend to be short-lived because the energy required to overcome settled practice is so significant and relentless. The bottom line, suggested in the title of this chapter, is that self-authorship will require serious professional and institutional accommodations.

### **Linking Development, Learning, and Instruction**

The patterns of intellectual development that occur during the college years have been well documented (see, for example, Belenky, Blythe, Goldberger, and Tarule, 1986; Baxter Magolda, 1992; King and Kitchener, 1994; Perry, 1968), yet these descriptive accounts are only potentially useful for education. We may be troubled by evidence that first-year college students see knowledge as mostly fixed truths created by others, but the findings

themselves only dimly illuminate a process for stimulating further growth toward higher-level functioning such as self-authorship. Indeed, these descriptive accounts may simply verify what we have long taken for granted: that intellectual growth, like student motivation, for example, is yet another complicating but largely uncontrollable factor in the education process. What is needed is a more coherent storyline showing the interconnections among learning, development, and instruction.

Several obstacles need to be addressed in developing this fuller story. One difficulty is that the significant research contributions in each of these areas (learning and student development) have developed in parallel rather than as a holistic and coordinated project. Second, the literatures in these areas are reaching different audiences. Indeed, our institutions are organized around professionally distinct groups (for example, academic and student affairs) who frame their worlds separately and have professionalized their roles based on their own special knowledge bases. This professional distinctiveness is enhanced and reinforced through campus structures and national associations that play to these separate identities. Is this a problem? A recent study, *Learning Reconsidered: A Campus-Wide Focus on the Student Experience*, undertaken by the National Association of Student Personnel Administrators and the American College Personnel Association (2004), would seem to suggest that it is. This entire monograph is devoted to the claim that all of higher education needs to rethink the traditional dichotomies that divide responsibility for student learning across various institutional precincts.

To digress slightly here, during the period in which I was preparing for writing this chapter, I was also engaged in teaching a graduate course I developed some years ago dealing with research on human cognition and relationships with instructional practice. The course reading material typically includes dozens of articles and chapters chosen to bring students into contact with the most influential researchers and writers, ranging from the onset of the cognitive movement in the late 1950s to the present time. When I encountered *Learning Reconsidered* and began thinking about its purpose, I was eager to see how the mainstream research on cognition and situated cognition may have been reflected in the reference list of this interesting work. What I tentatively guessed was quickly confirmed: there were no sources in common. The reverse is true as well: very little, if any, of the mainstream learning research my students were reading referenced the developmental literature of primary interest in the student affairs domain. If I wanted my students to see this research, I would need to look outside the typical sources that address learning theory, which I did for a portion of the course. The task we then faced was how to place the relevant concepts from these different literatures on the same page, so we could fashion a coherent view of learning and learners. This is not a simple process, even with time and resources to devote to the task.

A different issue arises even if our divergent professional groups were inclined to be on the same page. This is the matter of how we convey knowledge to busy practitioners. When the findings from research in the

domains of learning, development, and instruction are distilled and compiled for practitioners, what we typically find is a rather daunting array of abstract propositions that are difficult to understand as a coherent story and rarely point to a coherent plan for action.

Two such compilations of findings from research on learning during the past fifteen years exemplify efforts to inform schooling practice. In 1993 the Presidential Task Force on Psychology in Education of the American Psychological Association summarized twelve learning principles in *Learner-Centered Psychological Principles: Guidelines for School Redesign and Reform*. In 1998 the American Association for Higher Education, the American College Personnel Association, and the National Association of Student Personnel Administrators produced their own report, *Powerful Partnerships: A Shared Responsibility for Learning*, which presented ten learning principles for consideration. It is quite common for practitioners to acquire information about learning from relatively brief listings of the important points or themes. The orientation in these presentations generally reflects a cognitive bent; we are reminded that learners actively construct meaning, that existing knowledge is crucial to future learning, that there are individual variations and motivations that influence learning potential, and that learning is contextual and often social in nature. Given that we have been working on this research for a good fifty years, there are quite a lot of details to share beyond these major themes.

Notably, in each of the summaries mentioned, only a nod is given to learning as a developmental process. Expressed in the form of a single principle in each list, development essentially becomes one more thing to consider alongside multiple other dimensions of learning. Educators who may be interested in finding out how learning relates to development are essentially left to figure the story out on their own. Indeed, given the fragmentary nature of most such presentations, designed to give busy professionals a peek at important research findings, the successful reader will likely be the one who comes already equipped with a well-developed schema for this research, ready to engage in top-down processing. The individual who is less conceptually prepared will experience greater difficulty making sense of the whole.

A more extensive and widely cited resource on learning research comes from the National Research Council's 1999 study, *How People Learn: Brain, Mind, Experience, and School*. This more extensive discussion of learning research includes a chapter on intellectual development in early childhood and makes the case that learning and development should be viewed as integrated, not parallel, interests. The authors clearly show that intellectual development is critical to understanding how children make sense of and interact with their environments, and in particular they show how changes in conceptual growth occur. The case is also made that children comprehend very early how their own minds work and how to control their own learning activities through metacognitive strategies. Research is also cited, as a caution to teachers, that early on, some children may adopt a view of their own intelligence as fixed, in contrast to others who believe intelligence

is malleable and can be increased. The critical point about these beliefs is that even at an early age, children react more or less productively to potential learning situations based on assumptions they make about their own intelligence. Specifically, what is at stake is whether children come to see their educational experiences from a learning perspective or a performance (compliance) perspective.

However, in the manner of textbook treatments of complex topics, subsequent chapters in *How People Learn* move on to other topics, and the importance of developmental trajectories is not worked all the way through. Specifically, this compilation of learning research does not report on intellectual development during the early adult years. So, again, despite the tremendous value and popularity of this particular resource, there is much left for practitioners to work out for themselves with respect to intellectual growth.

## **Self-Authorship and Learning**

The general idea now emerging is that theories of learning and intellectual development (self-authorship) should do more than coexist in parallel frameworks; rather, they should bootstrap each other in the service of schooling practices that view student development and learning as part of the same overall growth trajectory. In this section, I briefly point to some of the common ground that should allow such a view.

Readers should keep in mind that what we know about learning has been a moving target and continues to change and evolve. Since the 1950s, we have seen at least three major theory shifts that propose dramatically different conceptions of learning, ranging from behavior analysis, to information processing, to cultural participation. Each of these frameworks for explaining learning suggests its own particular conception of the learner, and over time we simply come to see learners in quite different roles.

Behaviorally, learners are subject to conditioning through the systematic reinforcement of particular behaviors in particular contexts. Complex behaviors can thus be acquired using applied behavior management techniques, and real competence in valued activities can result. Critics argue, perhaps unfairly, that conditioning puts the learner in a strictly passive role, but that is an argument for another time. With the beginning of the cognitive revolution, learning, which could be broadly defined in terms of the construction of meaning (see Bruner, 1990), was increasingly seen as something the learner does rather than something that happens to the learner. In essence, learning itself became an acquired commodity the learner could own, could become good at, and could develop an identity around. Learning could be incidental or purposeful, private or social, and could best be seen as a constructive or developing process.

Within the cognitive framework, knowledge development plays a central role and is seen as complex and evolving into specialized memory architectures. Common architectural forms include scripts, schemas, and

conceptual networks. The basic idea is that humans naturally create representations of experience that capture not so much the details but the essential meanings they will need to negotiate further experience. For example, visits to the doctor, the dentist, the pastor, the teacher, the sporting event, the wedding, the graduation ceremony, and thousands of other culturally important events are coded in terms of the regularities of these events that give them meaning, and these coded scripts allow future visits to proceed with predictability and comfort. Stories too are remembered not verbatim, but in terms of story schemas that allow us to easily traffic across stories, remember them, and even make them up when needed.

Part of the mystery of learning is the question of how we move from relatively naive, shallow, or incorrect representations to scripts and schemas that are more complex and suitable for the world yet to be discovered. It turns out this is very much the developmental mystery faced along the route to self-authorship. How do we create the conditions that cause students to change their minds—to give up an early set of epistemic beliefs in favor of more advanced beliefs about the nature of knowledge? If these questions about learning and development were of a totally different order, then we might expect the mechanisms supporting change to differ as well. Yet the change mechanism we talk about with our learning hat on is virtually identical to the change processes we look to when wearing our developmental hat. The basic sense of it emanates from the Piagetian notion of conceptual conflict or disequilibrium. The basic idea is that humans tend to modify their beliefs or conceptual structures when these beliefs are no longer compatible with new evidence. This fundamentally basic idea has been elaborated by Dole and Sinatra (1998) from a cognitive psychology perspective and by Bendixen and Rule (2004) from the perspective of personal epistemology.

Continuing the story just briefly, knowledge, in whatever state of construction, leads to other desired outcomes, such as perception, comprehension, further knowledge development, problem solving, and continuing development of one's identity as a learner and participant in cultural endeavors. All of these cognitive activities are more or less under the control of the learner, and when there is conscious awareness of how the process is going and deliberate application of strategies to correct difficulties, we say the learner is behaving metacognitively. The learner behaving metacognitively understands there is something to know about knowing and using knowledge. This realization and skill tends to separate people in terms of school success, but fortunately it is a commodity that can be shaped and cultured in learners.

We have also recently come to realize that learning can be thought of in ways that do not presuppose knowledge to be the privileged commodity. Learning outside of schools, within the cultural activities of daily life, is thought to focus more on the particular roles that people acquire, and the identities they develop, as practitioners (see, for example, Lave and Wenger, 1991, and Wenger, 1998). Master practitioners will certainly be seen as knowledgeable, but knowledgeable in the sense of their total adaptation to



a domain of practice. Within everyday cultural practices, there is no assumption that explicit verbal knowledge is necessary for application to future contexts. Rather, it is knowledge in practices situated within a lived-in world that is of most value. Such knowledge is communicated narratively and tends to be codified not in the kinds of propositions that appear in texts, but in the stories that are common within families, work groups, or professional communities. One of the interesting features of Baxter Magolda's longitudinal study, as well as some of the other special pilot projects she and others speak of, is the prevalence of stories. These more complex settings for learning apparently involve a more complete adaptation to challenges and situations that can best be conveyed narratively. In contrast to the more computationally oriented cognitive models, stories are not simply confined to addressing knowledge and skill; they also include intentions, feelings, commitments, strategies for resolving dilemmas, and the like. In his provocative book *Acts of Meaning*, Jerome Bruner (1990) reminds us that learning is about the construction of meaning, and despite what he refers to as cognitive psychology's preoccupation with individual computation of information, we should never assume that learners can be separated from their cultural world and realize their full powers. His meaning is clear in the statement that "a failure to equip minds with the skills for understanding and feeling and acting in the cultural world is not simply scoring a pedagogical zero, it risks creating alienation, defiance, and practical incompetence" (p. 43).

### **Judging Learning Theory by the Company It Keeps**

In spite of the fact that researchers have been so industrious for so long in the learning arena, they have left a large gap between the questions of how knowledge and skill develop and how human beings themselves develop as intelligent participants in world. If the research programs oriented to how we build knowledge and performance capacity in people are deemed incapable of answering questions about how we influence personal epistemologies and identities as knowers, is that the fault of the knowledge base itself or the way in which we have typically interpreted and applied knowledge about learning? Why is it that we seem enriched with such elegant descriptions of how development occurs but stuck in such a complete mystery about what to do about it?

I propose that we are better equipped than we may think, based on developments in learning research, to design environments that simultaneously address developmental needs along with the more traditional learning needs that are typically of concern in academic courses and curricula. Part of the justification for this assertion is that typical schooling scripts actually draw on and use only a fraction of what we know about human learning. In the process of thinking about learning within such a con-



strained frame, we have imposed quite severe penalties on imagining what is possible.

Recitation and teaching by telling is confirmed by research to be the dominant script for instructional practice in American schools. This has been the case for nearly a hundred years. While we may use other terms, such as *lecture* or *direct instruction*, the processes involved in recitation are familiar to every citizen. This script for teaching and learning holds the teacher responsible for knowledge delivered, tasks undertaken, questions posed, and assessments of progress in learning.

Within this narrow yet dominant conception of instructional practice, learning research has proven to be useful, but only a fraction of the available horsepower is actually needed. Thus, if the dominant market for learning research is the schooling enterprise, and the dominant schemes for schooling privilege a particular use for learning research (support of the recitation script), then we may easily overlook other applications, such as support of concepts like self-authorship, which are not typically articulated as the chief aims of schools. In a sense, we have engaged in a type of self-handicapping in which our expectations for learning research have been seriously diminished.

### **Moving from Knowing That to Learning How**

Knowing how to conceptualize learning, development, and instruction as a single unit of analysis is a good beginning. The more daunting challenge is to learn how to implement models of instruction that are consistent with the major premises underlying self-authorship. How are these new goals to be implemented? What is the process for encouraging and supporting instructional faculty to learn and implement teaching practices that represent significant departures from the status quo?

During the past decade or so, we have seen dozens of major studies indicating the increasing gap between what we know about student learning and development and the dominant instructional and curricular practices that characterize existing school cultures. The problem seems to be that as our knowledge of learning and development changes, classroom practices are generally stuck in the same gear—based in the same script that has dominated education across generations. Studies that have looked historically at teaching practices point to continuing reliance on a few commonplace instructional activities, guided by mostly commonsense notions about student development and learning. As Derek Bok points out in his recent book, *Our Underachieving Colleges* (2006), there continues to be an overwhelmingly conservative bias in instruction methodology, with upward of 70 to 80 percent of faculty members continuing to rely on the lecture or some close variation as the mainstay of their teaching. These numbers are consistent with a survey conducted at my own institution during a study in which we were attempting to forecast classroom designs for the future.

Faculty learning and adaptation is a major consideration as we consider potential mainstream adoption of instructional approaches that do not follow the usual schooling script, such as would be the case with the learning partnerships model. As Baxter Magolda (1999b) has herself described, the model presents a daunting challenge even for professors who have conceptually assimilated the right moves that need to be taken. Barbara Bekken and Joan Marie report similar challenges in Chapter Five in this volume, even with the support of a university teaching center, their own small faculty learning community, and continuing direct advice from Baxter Magolda. In their struggles to implement a four-semester integrated curriculum, they identified their own need for the evolutionary bridge that Kegan (1994) describes as necessary to connect students to new ways of thinking. Whether the metaphor is bridge building or border crossing (Baxter Magolda, 1999b), the essential theme is the same: the adaptation to new teaching methodologies is complex and must be thought of as a learning problem in its own right—one that is conceptually similar to the developmental changes and interventions we are proposing for students. Before we discuss interventions, however, it will be useful to briefly consider how these deeply rooted understandings of instructional practice were formed in the first place.

If we return for a moment to the conditions that gave rise to the familiar patterns of teaching and learning, which many now recognize must change, we should understand that these patterns were born out of direct experience. We acquire our initial sense of schooling practices as we would learn the regularities of any other cultural activity, such as visiting a restaurant, going to a doctor, taking a trip, or negotiating a romance. As each experience unfolds, we abstract from it the main defining features and store these features as a representation of the experience. The importance of all such scripts or schemes is that they give structure and meaning to our lives; these structures allow us to carry out our affairs with predictability and reasonable degrees of comfort. In the case of schooling, even the youngest of participants quickly develop for themselves an in-the-head account of how school goes. These accounts are continually updated and refined with ongoing experience, and importantly, they are shared with others as narratives of the practice of schooling. It is important to note that there is no direct telling in this; the learning is experiential, and it is powerful.

This adaptation to schools is also more complex than simply knowing what schools are about and how to negotiate the tasks presented in classrooms. As Carl Bereiter (1990) points out, schools are richly contextual and involve extensive adaptations on the part of children. Hence, there are additional components to students' overall adaptation to school that may involve affect, identity or persona, problem adjustment strategies, and codes of conduct. Bereiter is thus suggesting that children undergo an early and massive adaptation in which schoolwork is seen as a job to be undertaken—a type of social practice in its own right. Given that the entire structure of schools

is designed to support and reinforce this adaptation, it is unlikely that participants would develop scripts at odds with the norm.

As we examine the workings of schools, it becomes clear that they constitute one of the most culturally powerful and pervasive experiences that virtually all citizens share. Within this universally shared activity, a shared narrative develops that conveys the core meanings of school experience and contains all of the cognitive and emotional entailments that are needed to create lasting impressions and commitments.

The role and purposes of teaching in schools are clearly a central part of the cultural image of schools. Experiences with teaching will vary, of course, but the central tendency in Western society is to organize schools where “human beings deliberately teach each other in settings outside the ones in which the knowledge being taught will be used” (Bruner, 1996, p. 20). The universal methodology for this is telling, questioning, and testing (Finkel, 1999; Tharp and Gallimore, 1988), where “individual and presumably omniscient teachers explicitly tell presumably unknowing students something they presumably know nothing about” (Bruner, 1996, p. 20). Following repeated exposure to salient examples of this culturally sanctioned practice, a deeply embedded image of teaching is created that no amount of telling will dislodge.

By the time college students enter their respective institutions, they will have completed more than a decade-long apprenticeship in the art and practice of school going. During this time they will have completed more than twenty thousand academic tasks and will have amassed significant experience in academic skills such as note taking, chapter outlining, test taking, strategic reading for tests, paper writing, and performance of laboratory exercises. Mastering these skills is an important part of the total adaptation to school, although they may be largely irrelevant to performance in the relevant domains referenced by the academic tasks. Even worse, what is gotten across through these instructional tasks and arrangements for learning may have little to do with the movement toward self-authorship.

Instructional faculty in colleges and universities are themselves subject to these dominant cultural images of teaching and learning. They have experienced the same apprenticeships in schools, and, largely self-taught in the practice of teaching, they have had no reason or way to acquire alternative scripts. Moreover, their script-governed activities are seldom subject to disruption, given the bureaucratic supports available and the fact that students are working from the same script, and perhaps even demanding it.

## **Border Crossing for Faculty**

What we are now asked to imagine is a change process for faculty that will counteract what is a deeply embedded cultural image of teaching, schools, and student engagement. The purpose of the preceding paragraphs was to provide some background on the nature of the complete adaptation that has

taken place, so we can make realistic assessments of how to proceed to implement a new model. Clearly, the learning partnerships model poses quite different assumptions about knowledge development than would be characteristic of a schoolwork script, and the accompanying instructional principles suggest entirely new relationships with students, basically extending to them a full partnership role in knowledge construction. The question then is how to proceed.

The difficulty with script change (read also as conceptual change) is that direct instruction—telling—will not work. The scripts that govern teaching and learning in most college classrooms were acquired through experience, not telling, and hence change strategies will need to include direct experience. Several ingredients seem necessary. First, the complexity of constructivist-type instruction, which is posed as a basic requirement of the learning partnerships model, cannot be easily mastered alone. Assistance will be required as newcomers to the methodology attempt to frame and implement entirely new interactions with students. It is simply not possible to imagine such change based on verbal instruction alone. Second, the assistance provided will need to occur within authentic activity structures. This essentially means dedicating real classrooms as laboratories for faculty learning. Third, within this environment, the apprenticeship relationship should take on a pattern that is decidedly developmental in nature. This means that not only is technical assistance provided, such as modeling a certain type of classroom discourse process, but the goal is also to guide the apprentice to reinvent conceptions of learning and teaching through assistive dialogue. The aim of such assistance is to move the apprentice toward increasingly self-guided performance, which over time may become completely internalized and automatic.

We do not normally think in these terms with respect to faculty development. A more typical approach is to employ for faculty a close approximation of the models they typically use for student learning. That is, we organize workshops designed to convey information verbally that may be used for instructional improvement. We are enticed into this by the dominant script for teaching and encouraged by the fact that verbal propositions in their stripped-down versions are simple and easy to package and deliver.

The analysis and suggestions offered here are certainly not of my own invention. Some readers may have recognized the distinctly Vygotskian concept of assisted performance in this discussion. In this case, I am drawing from the work of Tharp and Gallimore (1988), expressed in their influential book *Rousing Minds to Life: Teaching, Learning, and Schooling in Social Context*. Their originating concern in producing the book is that schools actually do very little teaching—that the ubiquitous recitation script is designed primarily to train students how to deliver factual answers to satisfy relatively low-level questions flowing from the school's curriculum objectives. Within this framework, students would rarely be provided assistance in developing elaborated ideas requiring reformulation of existing concepts.

Tharp and Gallimore essentially propose a reframing of teaching and schooling based on Vygotsky's transformative ideas (1978) about the relationships between learning and development (see also Moll, 1990). Vygotsky's signature concepts were to recognize children as active agents in the educational process and, more important, demonstrate that instruction must be arranged so that learning processes effectively lead development. Specifically, he proposed that a fundamental step in the educational process is to recognize that zone of proximal development, where a child might perform at an incrementally higher level given proper assistance. The process would involve the child's being offered a difficult goal, then attaining that goal with adult assistance, and then achieving independence from the adult through the guidance of self-talk and self-mentoring. Over time, the process repeats, with the child engaging in a process of internalizing the social process to achieve a new level of consciousness.

This process of assisted performance is equally adaptable for support of adult performance and development and would involve the same series of stages. The initial step is to have the novice engage the desired teaching practice in a supportive environment (activity setting), where more capable peers or mentors can provide the assistance needed to negotiate the task at hand. In this context of assisted activity, the novice may be asked to perform routines or activities beyond his or her current repertoires and perhaps discrepant from existing beliefs. Over time, the assistance provided by others is replaced by self-guidance and inner speech.

The activity setting may involve planning, classroom instructing, working with individual students, assessing performance, or any other activity that is an authentic part of the overall instructional context. During the period of high mentor regulation, the novice will be an authentic coparticipant but may not fully understand the way that goals are being formed, transactions with students are being negotiated, and flow of activity is being managed. Through discussion and dialogue, the novice gradually comes to acquire some concept of the activity, and gradually a degree of intersubjectivity with the mentor will emerge. As this happens, the mentor or peer is able to use his or her significant arsenal of supportive strategies (such as modeling, cognitive framing, questioning, feedback, and contingency managing) to move the novice to the point where other-assistance can be withdrawn and self-assistance can take over (see Tharp and Gallimore, 1988, for a more complete discussion).

Following these two stages of direct assistance, resulting in increased self-regulation, the performance will become internalized through ongoing practice and application. As with any other complex skill, there is the possibility of performance regression—perhaps with changes in context—and the mechanisms of earlier stages may need to be reinstated.

Clearly the image of development as a simple unfolding process is a less than satisfactory metaphor. For adults who teach, the stakes for getting it right are high. The proposal offered here is to deliberately employ

for professional practice the same processes for rousing minds to life that are used with children and young adults. If there is any chance of overcoming the inertia of existing instructional models, we will need an explicit curriculum, based on sound theory about learning and development.

### **Taking Intellectual Development Seriously**

Sometimes the truth can slip out quite innocently. During an extended discussion of issues related to the university's core curriculum and its contribution to student learning outcomes, a respected senior professor remarked on how fortunate it is that we matriculate students at age eighteen and graduate them at age twenty-two or twenty-three. Stated more as a tension reliever at the end of a long day, this observation may contain more truth, or perhaps hopeful anticipation, than we care to admit. In the absence of a rich concept of intellectual growth, is it possible that we simply assume that development takes care of itself as a by-product of maturation (that is, getting older)? Or might we assume that development does require special assistance of the type provided primarily by student affairs programs, leaving the academic sector free to focus on the acquisition of increasingly complex general and disciplinary and professional knowledge bases?

In either case—assuming that development happens automatically as a by-product of increasing age or that someone else is responsible for nudging it forward—the question of intentionality is raised. The key question is suggested in the chapter title: Are we really serious about student intellectual development? As we consider the specific concerns and assertions outlined here, it may be useful to hold in mind some of the indicators that something is being taken seriously in higher education.

Certainly one indicator that a process or outcome is valued is that we see tangible signs of commitments to that process or outcome. Such commitments are expressed in institutional goals, included in strategic plans, and visible in the ways in which we think and talk about these outcomes on our campuses. Resources are generally committed to processes and outcomes we take seriously; they tend not to be allocated for outcomes we take for granted, even if those expected outcomes are deemed highly desirable.

We tend to have benchmarks in mind for outcomes we take seriously. In institutions that focus heavily on research, close attention is always paid to grant dollars, research expenditures, and publications. Metrics are in place to assess performance in such areas. We tend to know with some precision the square footage of office space needed, the number of classroom seats required, the bandwidth required for technology applications, and the timeliness with which departmental bills are paid. On the business side of our work, tangible reinforcement is provided when performance meets or exceeds expectations. Things that we take seriously get noticed. Institutionally we know how to take seriously a very large range of processes and outcomes. Think about fundraising, for example. Institutions that take

fundraising seriously tend to follow their graduates and potential patrons over a lifetime. Performance is measured not simply by what we do today but what we can put in place for the future.

Finally, those things we really take seriously generally show up as indicators for career advancement. For faculty members, the promotion and tenure process is a prime place to look. Here we do not simply take it for granted that one will publish, present, bring in funds, and teach a certain load; we measure it directly, and there is usually continuing speculation about how much is necessary for success. In essence, we know how to take things seriously in higher education. Thus, it is a fair expectation that real commitments to the intellectual life of our students will be a visible part of the institutional landscape.

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