

Preparing Teachers to Teach the Liberal Arts

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If we are to raise our students' achievement levels in the liberal arts, we will need to begin with those responsible for imparting history, language arts, math, science, and the fine arts to them—their school teachers.

For the better part of a century, America's colleges and graduate schools of education have been primarily responsible for preparing people to teach the liberal arts in primary and secondary schools. Yet for all that experience, there is still no consensus as to which practices and courses produce effective classroom practitioners. Daniel C. Humphrey and Marjorie E. Weschsler have stated the problem succinctly:

We currently know very little about how a teacher candidate's educational background, previous classroom experience, course work, clinical practice, mentoring and school placement interact to produce a teacher with the skills and knowledge to meet the academic needs of diverse students. The research will be difficult in and of itself. The real challenge, however, will be applying this research to practice.

(Humphrey and Weschsler, 2006)

Despite this depressing reality, we are not totally in the dark as to how institutions of higher education can fashion and strengthen liberal arts teachers. Three areas of teacher preparation, in particular, must improve if we are consistently to develop teachers who are effective in the K-12 classroom. Most obvious is to ensure that those entering the teaching profession are themselves well educated, by which I mean liberally educated, broadly educated, but particularly knowledgeable in the subjects they will eventually teach. Beyond this, we must also improve their understanding of how to teach the subject material they are mastering, i.e., their pedagogical prowess. And we must increase both quantity and quality of time that would-be teachers spend with master instructors, who are the bridges between raw knowledge, theory, and the actual practice of instruction.

Knowing of What You Teach

It may seem obvious that, if one is to teach high-school social studies, for example, one should be well grounded in the fundamentals of U.S. and world history, as well as basic economics and geography. If one aims to teach middle school math, one should have mastered algebra and geometry, if not trigonometry and calculus.

In fact, however, today we have no such consensus. Rather, our profession is split between those who contend that teachers should above all master meta-skills—analysis, decoding, critical thinking, etc.—that students will use to gain knowledge via their own discovery of it, and those who stress that teachers should first and foremost master subject matter, i.e., the knowledge upon which any effective use of meta-skills will rest.

In my view, it isn't so much which one is the correct view, because would-be teachers need both content and pedagogy. The problem rests in who, and how, that information is dispersed. Let's begin with content. Because most schools of education are guided by the belief that meta-skills trump content, liberal arts content is taught principally by the arts and science faculty. Education faculty provide instruction in "methods."

That seemingly logical division of labor isn't working as well as it needs to, in no small part because of a mounting problem on the arts-and-science side of the house: too often, today's subject-matter courses are themselves highly specialized and not necessarily compatible with the type of knowledge that K-12 teachers need most. As the stories of countless university core-curriculum battles make clear, fewer professors want to teach the introductory survey courses (i.e., broad liberal arts courses) that would make the most sense for future teachers to study.¹ Too many of our current teachers—especially in middle and high school, have neither a sense of the broad span of their chosen academic disciplines nor been taught to model deep analysis and understanding of an idea, a poem, a theory, a painting, or an equation. Absent that understanding, they cannot hope to teach it to their students. For many arts and sciences faculty, their own professional standing and advancement depend on hyper-specialization in obscure content areas, which carries over into the courses that they teach. The flabbiness of "general education" and "distribution" requirements for undergraduate students exacerbates this problem.

Through his network of Core Knowledge Schools, E.D. Hirsch has been willing to codify and make available a sequenced and cumulative narrative that introduces our world to children, to reassert, if you will, the authority of knowledge. Using such narratives to create a relatively stable, structured, and vertically integrat-

ed national curriculum would offer guidance, clarity, and purpose to teacher preparation in the liberal arts: the course work in the arts and sciences required of teachers could be defined just as it is for pre-meds, and the schools of education could focus on the effective delivery of specified content.

It's hardly novel to point out that other professional schools, such as medicine and engineering, require that their students first and foremost master the knowledge essential to their profession, either before entering the professional preparation program or during the course of it (or both). Every student who desires to attend medical school must complete this coursework. It's worth remembering, however, that not all would-be doctors major in chemistry or biology. Many major in English, history, or some other discipline—so long as they also take the required pre-med courses.

It is time for American schools of education to do the same. We should standardize the core content that teachers—certainly teachers of the primary and middle grades—will need to acquire and structure our teacher preparation programs to ensure that they acquire it, whether from education professors or arts and science professors or elsewhere. (If they acquire it outside of the university setting they should be able to “test out” of these course requirements.)

In the United States, a national, or at least a state-wide adoption of a sequential, content-based curriculum could enable teacher preparation programs to define—and then teach—the content their students would require. But whether we have a national curriculum or not, surely we should be able to get states to agree on a substantial portion of what all their future teachers need to know, and see to it that all students who want to enter the teaching profession master that material. The remaining portion of the requirements could be state-specific or institutionally idiosyncratic.

Translating Content for the K-12 Classroom

Teacher preparation dare not limit itself to content alone. Instructors also need to know how to instruct others. Some people possess plenty of knowledge that they've no idea how to share. Others are good sharers but don't possess enough knowledge themselves.

This problem would be far easier to tackle if we knew more about what makes a good teacher a good teacher. Reviewing the major research in the field, only two lessons can be drawn with confidence. First, all else being equal, abler students become more effective teachers (where “effective” is defined as having a differentially positive impact on student learning compared to other teachers with similar pupils). Summarizing the multiple studies conducted on the sources of teachers' differential

impact on student learning, Grover J. Whitehurst estimates that a teacher's cognitive ability has about twice as much impact on student learning as the next leading factor—focused training—and far more than any other currently measurable teacher attribute.²

Second, we know that high cognitive ability of teachers is not in itself sufficient to ensure effective learning by their pupils. But much of the rest remains mysterious. Formal teacher preparation contributes, to be sure, but not nearly as much as one would wish. Measuring the effectiveness of teacher preparation programs in raising student performance, Jim Wycoff suggests that analysts can verify only about 25 percent of the variables that separate effective and ineffective teachers (and about half of *that* is cognitive ability).³ In other words, three quarters of what makes a teacher effective depends on factors beyond academic credentials.

The field, in short, is wide open to additional research—and better ideas. Deborah Ball, dean of the School of Education at Michigan State University, has one. She has conducted pioneering work in describing the kind of “mathematical knowledge for teaching” required to ensure students’ effective mastery of mathematical content. Focusing on such issues as the understanding of errors and the ability to re-cast mathematical concepts to uncover fundamental principles, Ball’s work represents a constructive step toward a strong and reliable foundation for mathematics instruction.

For more such advances to occur, liberal arts faculty need to become more involved in training tomorrow’s teachers. This means that the fundamental working relationship between colleges of education and the liberal arts colleges must change. Too often, liberal arts courses for teachers at the masters level are better designed for those wanting to pursue graduate studies, not for students who will be teaching primary and secondary pupils. The material taught should dovetail with what student teachers will face when they enter the classroom.

Training teachers to make better use of data when teaching will also improve their ability to deliver content in a way that students can best understand. It is now beyond reasonable dispute, for example, that the frequent employment of formative assessment measures, when combined with the rapid analysis of the results and the use of this data to inform immediate changes in classroom instruction, has a major positive impact on student learning. Preparing future teachers to construct assessments to provide fine-grained information about student performance, to properly interpret that information and then engage in differentiated instruction should now be a fundamental part of all teacher preparation programs (Nancy Protheroe, 2001).

In other instances, teacher-educators can and should take advantage of domain-

specific research. Since the publication of the findings of the National Reading Panel in 2000, schools of education can draw on a strong research base and provide future literacy teachers with systematic training in such critical domains as phonemic awareness, guided reading, and direct and indirect vocabulary instruction with carefully differentiated attention to readers' needs (NICH, 2000). It did not surprise (or disappoint) critics of schools of education to discover that the great majority of these schools have, to date, resisted the whole-scale redesign of their literacy programs to ensure that their student teachers do in fact have this training (Walsh, 2006).

Finally, future teachers should be exposed to the results of international academic assessments—TIMSS and PISA—and conclusions that can reasonably be drawn from analysis of those test results. It is clear, for example, that the American high school student is exposed to too many topics in too short a time with little opportunity to grasp basic principles. Ironically, more time spent on fundamentals translates into curricula that reach higher levels of content knowledge than are often offered in the United States.

At the programmatic level, some innovative designs for teacher preparation hold great promise. In New York City, for example, the Department of Education, the City University of New York, New York University, and the Petrie Foundation are developing an undergraduate program to prepare teachers of high school math and science. Tuition is free, and students spend time in the New York public schools from their freshman year onwards. The most striking feature of the new program that I've seen at Hunter College, however, is that five chairs of departments (Biology, Chemistry, Mathematics, Curriculum & Teaching, and Educational Foundations), together with multiple faculty members and teachers from the public schools have been working closely together to design the course sequences, the course content, and our students' school-based experience.

Alverno College in Milwaukee also enjoys an unusually healthy relationship between the liberal arts faculty and professors in the education department, resulting in more-relevant academic courses for teachers. Arthur Levine, president of Teachers College at Columbia University and a recently outspoken critic of teacher preparation programs, had this to say about the program:

[The] liberal arts faculty, who consider education one of the more rigorous majors at Alverno, are also deeply involved in the teacher education programs. Language arts education, for instance, is coordinated by a senior English department professor.⁵

Unfortunately, there are no comparable models that address the broad spectrum of liberal learning that tomorrow's teachers will need, but the two programs discussed above offer a promising model.

Preparing Teachers for the Classroom

Even if we provide teachers with the content, and give them models for applying it to K-12 students, young college graduates will still falter if they don't receive competent hands-on experience and perceptive feedback on their performance and if they don't have the opportunity to spend significant time on task with master teachers. Currently, student teachers typically spend at least a semester in a K-12 classroom observing and teaching. Observers, usually adjunct professors or instructors in education, visit and provide feedback. Unfortunately, those observers rarely have much structured guidance as to what to look for. Consequently, the standards for what constitutes effective classroom teaching vary wildly across schools—and often within them, as well. An experiment we ran at Hunter College reveals as much. Using videotape of a student-teacher's lesson, we asked our field supervisors to assess, then and there, the performance they were observing using the rubrics they commonly employed. As expected, their grading criteria were idiosyncratic, and thus their evaluations of the student teacher in the video ranged from poor to excellent. We subsequently took the opportunity to redesign and standardize rubrics for evaluation, and field supervisors now undergo training with the help of common videotapes in order to hone their observation skills and move toward a shared understanding of judgments and standards. Beyond their use as tools to raise the level of field supervision, these videotapes will primarily be employed for one-on-one instruction with our student teachers, and indexed and made available to our faculty for use in their own methods courses. I believe this approach to strengthened student-teaching holds great promise.

But tomorrow's teachers also need ample exposure to master teachers at work. Here, we again borrow from the medical school model. Appointing master teachers to clinical faculty positions (much as med schools appoint exceptional practitioners to their clinical faculties) would provide students the opportunity to interact from the outset with highly successful teachers. Moreover, the clinical faculty could be beneficial in helping the academic faculty mold liberal arts courses so that they dovetail better with what students will need when they begin teaching.

In short, we know where to begin. But we have a long way to go.

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Endnotes

¹ Lewis, 2006.

² Whitehurst, 2003. Also Hoxby and Leigh. (2005) Hoxby finds that pay compression, by dramatically reducing the number of teaching candidates from highly selective colleges (an admittedly imperfect, but still suggestive proxy for cognitive ability), “accounts for more than three-quarters of the decline in teacher quality.”

³ Wycoff (2006)

⁴ Schmidt and McKnight. (December 4, 1998) See also: Organization for Economic Cooperation and Development: Learning for Tomorrow’s World—First Results from PISA. (2003)

⁵ Levine, 82.