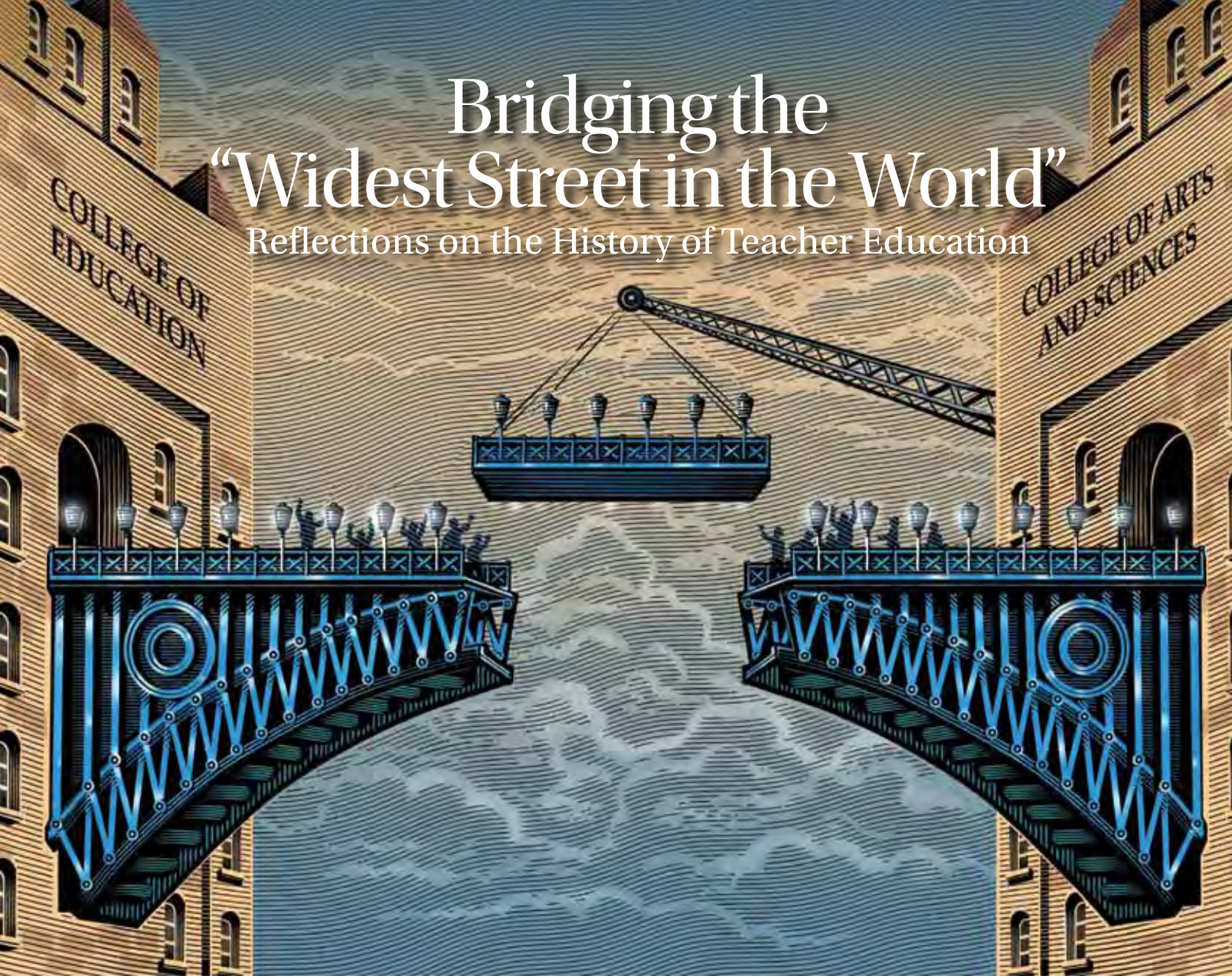
Bridging the "Widest Street in the World"

Reflections on the History of Teacher Education



ILLUSTRATIONS BY ROLAND SARKANY

By Jeffrey Mirel

For at least a half century, education reformers have quipped that 120th Street in New York City, the street that separates Teachers College from the rest of Columbia University, "is the widest street in the world."[1] Underlying this quip is the belief that Columbia's liberal arts faculty members regularly dismiss the child-centered educational methods promoted by their colleagues at Teachers College as at best misguided and at worst anti-intellectual. In turn, professors at Teachers College routinely denounce their liberal arts colleagues as musty traditionalists who fail to recognize that most elementary and secondary students in American schools find discipline-based education useless and irrelevant to their lives.[2]

Jeffrey Mirel is the David L. Angus Collegiate Chair in education and a professor of history at the University of Michigan, Ann Arbor. His previous positions include serving as a junior high and middle school English and history teacher. His most recent book is Patriotic Pluralism: Americanization Education and European Immigrants.

As cartoon-like as this portrait is, it contains more than a kernel of truth. Since the creation of public schools in the early 19th century, people have been debating questions about the relative importance of subject matter and pedagogical methods in teacher training programs.[3] Yet because of the highly decentralized nature of 19th- and early 20th-century American public education, these debates were essentially moot. Each school district was a largely independent governing body, and school board members in the vast number of rural districts across the land hired whomever they pleased, often regardless of a teacher's preparation (or lack thereof).

This situation began to change dramatically in the first half of the 20th century. Schools and colleges of education became an integral part of American universities, and state-created "normal schools" (charged specifically with preparing teachers) became colleges in their own right.[4] In both cases, these institutional changes seemed to offer the prospect of uniting specialists in subject matter and pedagogical methods. Instead, these groups sought to establish their separate areas of expertise and thus

wound up widening the gap between them. Indeed, for most of the 20th century, dialogues between "ed school" faculty members and their liberal arts colleagues about how to train prospective teachers in such fields as English, history, mathematics, and science were scarce, with neither side respecting the expertise of the other. With few exceptions, this lack of dialogue and collaboration in teacher training continues to the present day. It is arguably one of the most important factors contributing to the poor quality of teacher education in this country.

A parting of the ways between education and liberal arts faculty members was not inevitable. In fact, in the late 19th century, a different model emerged at the University of Michigan (U-M), in which liberal arts faculty members and the professors dedicated to the "art and science of pedagogy" worked together on teacher education. This unified approach to teacher education took root after a significant change in admissions procedures that U-M introduced in the late 19th century. At the time, virtually every college and university in the country admitted students on the basis of examinations, which differed from institution to institution. In 1870, U-M shifted from using examinations for admissions to requiring simply that prospective students graduate from "accredited" high schools. In this system, the accrediting agents were U-M faculty members and, as a consequence, liberal arts professors regularly visited high schools across the state (and eventually across the country), determining whether schools were teaching students well enough for them to be worthy of U-M admission.[5]

Known as the Michigan Diploma Plan, this approach to college and university admissions had two main effects on teacher education at U-M. First, U-M liberal arts faculty members broadened their intellectual horizons to assess not just whether the high school teachers they were assessing as part of the accreditation process knew the academic content they were teaching, but also whether they appeared to be knowledgeable and effective teachers. In other words, they paid attention to both subject matter *and* teaching methods. Second, the more these faculty members visited high schools, the more they realized that U-M students who became high school teachers needed training in how to teach. Consequently, in 1879, Michigan became the first university in the country to create a permanent chair in pedagogy, which was housed in the College of Literature, Science, and the Arts. Over the next two decades, the faculty members serving as the education chair worked closely with their colleagues in the College of Literature, Science, and the Arts to introduce U-M students to the "science and art of teaching." In other words, they helped students become better teachers in their subject areas.[6] As William Payne, the first education chair, put it, "Successful teaching involves two elements—[subject] matter and methods." He believed that these two aspects of good teaching were deeply intertwined and neither should be neglected.[7]

Unfortunately, early in the 20th century, this approach to teacher education at Michigan ended.[8] As liberal arts faculty members increasingly sought to develop their own fields of inquiry, few of them wanted to spend time visiting and accrediting high schools. To address this problem, in 1899, the university hired another education faculty member to take over the accreditation program. While some liberal arts professors continued to visit high schools, this redesign of the accreditation process was the first step toward dividing subject matter from methods at U-M. As the number of "educationists" at U-M grew, the university created a Department of Education within the College of Literature, Science, and the Arts. Faculty members of this new department increasingly focused their teaching and research on such non–liberal arts fields as educational administration and school finance. In 1921, the department left the College of Literature, Science, and the Arts and became the School of Education. With this move, faculty members in the liberal arts and their colleagues in the School of Education were literally and intellectually separated. The once-collaborative approach to teacher education vanished.[9]

Over the years, no one referred to South University Avenue, the street that separates the School of Education from Michigan's liberal arts college, as the "widest street in the world," but the gap between education specialists and disciplinary specialists in Ann Arbor became as broad and deep as at any university in the country. While the circumstances that led to this disconnect at Michigan were unique, the trend they represented was widespread. Indeed, the rise of schools and colleges of education and the growing indifference of liberal arts faculty to teacher training ensured that this gap would go unbridged for decades to come.[10]

For most of the 20th century, dialogues between "ed school" faculty members and their liberal arts colleagues about how to train prospective teachers were scarce.

Two other developments pertaining to the rise of schools and colleges of education made matters worse. First, between 1920 and 1950, state governments increasingly made schools and colleges of education the main institutions legally permitted to train prospective teachers for certification.[11] With this development, the center of gravity in teacher training moved almost completely to education faculty members whose areas of expertise were in such fields as educational administration, elementary and secondary school teaching methods, educational measurement (i.e., testing), and educational psychology. While prospective high school teachers still had to take liberal arts courses in areas such as English, history, mathematics, and the sciences to meet state certification standards, the certification bar often was quite low.[12] In addition, increasing numbers of prospective elementary school teachers took many if not most of their courses in schools and colleges of education, leaving them with modest exposure to traditional liberal arts courses.

This trend relates directly to the second development that undermined the quality of teacher education—the diminished weight given to liberal arts knowledge in teacher training curri-

cula. Beginning in the 1920s and continuing to the present day, many faculty members in schools and colleges of education adopted ideas rooted in progressive education that paid considerably less attention to curricula based in the liberal arts.[13]

Emerging in the late 19th and early 20th centuries, ideas developed by reformers known as progressive educators provided what was then a much-needed critique of the conditions and practices in public schools across the United States. At the time, most public schools (in big cities and rural areas) were overcrowded, most instruction was teacher centered, and, for the most part, the pupil's role was passive. Teachers taught curricula that were unrelated to the lives of children, focused on having students memorize rather than understand texts, and kept students in line using corporal punishment.[14]

Progressive educators sought to correct all these ills, but they were particularly concerned about the nature and content of school curricula, which they denounced as little more than collections of random facts (e.g., a list of the major rivers of South America). Worse, progressive critics argued, teachers typically presented the facts without any sense of context or even a reason why such information might be useful.

Dewey's connection of discipline-based subject matter and pedagogy was revolutionary. Sadly, over the next century, Dewey was badly misunderstood.

John Dewey, long regarded as the "father" of progressive education, focused on this problem in his classic 1902 essay "The Child and the Curriculum." He argued that changing the nature of curricula was central to improving the quality of teaching and, by implication, teacher education. Dewey was emphatic that pupils *should* learn discipline-based content, but he urged educators to recognize that, for the most part, such content was structured around questions and research that were meaningful to experts in various academic disciplines, not to children. As he explained, "Textbook and teacher vie with each other in presenting to the child the subject-matter as it stands to the specialist.... The material is not translated into life-terms." By lamenting the lack of "life-terms," Dewey was arguing for discipline-based curricula to be reframed in ways that connected "with what the child has already seen and felt and loved."[15]

Dewey declared that this should not be a process of either dumbing down or sweetening up such content to make it easier for students to memorize facts. Rather, he argued, reframing the content should enable educators to view traditional curricula as a vast storehouse of answers to problems that people in the past have solved. From that perspective, educators' primary task was to create engaging problems for students to solve, problems that would compel them to seek answers in discipline-based knowledge. As Dewey put it, discipline-based subject matter "must be restored to the experience from which it has been abstracted."[16] For example, in a Deweyan school, students might learn about the Pythagorean theorem when dealing with a real-life problem like building a shed that requires right angles on the corners, rather than just memorizing an abstract mathematical formula.

Dewey's connection of discipline-based subject matter and pedagogy was brilliant and revolutionary. It offered professors in schools and colleges of education a marvelous opportunity to reach out to their colleagues in the liberal arts to work together in reshaping curricula and teacher education along Deweyan lines. Sadly, this is not what happened. Over the next century, Dewey was badly misunderstood. He became a sort of patron saint for teacher educators who wanted to make classrooms more student centered and active, and to make the curriculum more relevant to students' daily lives. But few teacher educators were as committed as Dewey to making the liberal arts an essential part of this "new education." Many of them took Dewey's critique of the formal and abstract nature of disciplinary knowledge as reason enough to avoid stressing such knowledge—especially at the elementary level. Consequently, beginning in the 1930s, some education school faculty members sought to create their own curricula for elementary schools, curricula that were long on relevance and interest, but short on discipline-based knowledge and information.[17] Far too many of these curricula engaged children, but did not prepare them for more advanced studies. Compounding this problem, few liberal arts professors saw improving teacher education, especially on the elementary level, as something worth their time and effort. In short, no one seemed to realize the importance of early education in laying a strong foundation for future studies and for life. And so, as the 20th century wore on, the gap between discipline-based content and pedagogy widened.

Nowhere were these trends clearer than in the development of social studies education. In the late 19th and early 20th centuries, history, geography, and civics were important parts of most elementary schools' curricula. For example, in cities such as Chicago, Cleveland, and Detroit, the prescribed program of studies in the elementary grades regularly included biographies of historical figures like Columbus, Washington, and Lincoln; folktales or fables; units on geography (local, national, and foreign, depending on the grade level); and elements of civics, such as knowledge of the separation of powers in the Constitution.[18]

While there is not a great deal of evidence about how well these subjects were taught or how much of this material pupils retained, many child-centered progressive educators rejected these subject-centered approaches as merely simplified versions of the austere and distant disciplines that Dewey had criticized. Believing they were holding true to Dewey's vision, child-centered progressive educators in the 1920s and 1930s sought to create more relevant and interesting course materials that they argued "unified" history, geography, and civics into a new and exciting approach they referred to as social studies. Perhaps the most important educationist associated with this effort was Paul R. Hanna, who was educated at Teachers College

and who spent three decades as a professor in the School of Education at Stanford. During these years, he became one of the leading social studies educators both in the United States and internationally.[19]

In the 1930s, Hanna argued that elementary schools needed a social studies curriculum that would be much more interesting and relevant for children than the traditional history, geography, and civics approach of the past.[20] Believing that he was enacting Dewey's ideas, Hanna sought to create a curriculum centering on "human relations," which he believed were basic human activities (e.g., producing goods and services, communication and transportation, and recreation) that would resonate with elementary children. Echoing Dewey, he stated, "Human relations are those unitary life experiences that the specialists have broken up and classified into such subject-matter fields as history, geography, civics, economics, sociology, political science, ethics, esthetics, anthropology, [and] individual and social psychology."[21] But when Hanna got down to the specifics about what his "human relations" curriculum was about, the links between it and disciplinary knowledge—links that were central to a true Deweyan approach—were tenuous at best.

Defining interest and relevance as relating to the immediate experiences of children, Hanna developed what became known as the "expanding environments" or "expanding communities" approach. This innovation essentially scrapped the earlier discipline-based social studies curriculum and replaced it with a series of lessons that in the first grade focused on "home and school life." He then had children move outward to "community life" in second grade, considered how people adapted to different forces of nature in third grade, and so forth. Hanna believed that these topics were far more interesting for elementary pupils than stories about, for example, young Ben Franklin. Indeed, this approach questioned the usefulness of history altogether, because it was not part of children's immediate experience.[22] This is not to say that traditional history, geography, and civics disappeared from elementary schools, but they increasingly gave way to lessons based on such topics as what it means to live in a social group.[23]

Refining his ideas in the late 1930s and 1940s, Hanna published a series of enormously popular social studies textbooks that promoted the "expanding environments" approach in simple, colorful, readable formats. They were among the most widely used, if not *the* most widely used texts in elementary social studies in the country.[24]

The popularity of these texts was due to more than just their accessible format for children. Another factor was that elementary school teachers needed only a very modest amount of knowledge about history, geography, civics, or the social sciences to use these books. Hanna was quite honest about why he structured his approach to social studies this way. Writing in 1934, he stated, "I struggled for a long time to get some kind of structure that did not represent merely the traditional categories of economics, political science, sociology, anthropology, history, and geography, *because these would scare most teachers not having had anything in these fields* [emphasis added]."[25] Whether such subjects really would have "scared" elementary teachers (or prospective teachers) is anybody's guess. But Hanna certainly assumed that elementary teachers were unprepared to go beyond the simple stories in his textbooks. Thus, rather than providing a foundation for pupils to expand their historical, sociological, or economic knowledge—what Dewey had hoped problem-based curricula would promote—these stories became ends in themselves.

When one of the leading social studies educators got down to specifics, the links between his curriculum and disciplinary knowledge—links that were central to a true Deweyan approach—were tenuous at best.

Over the next half century, this problem worsened. As education and public policy professor David K. Cohen argues, the absence or weakness of state curricula and the decentralized nature of American school governance led schools and colleges to prepare prospective teachers "to teach no particular version of their subjects."[26] Rather than encouraging teacher trainees to delve deeply into how to teach liberal arts subjects, teacher

education programs taught their graduates "a generic sort of teacher education" that prepared them to teach "nothing in particular."* Given this situation, it is no surprise that many teachers eagerly embraced such easy-to-use (and relatively liberal arts–free) programs as Hanna's expanding communities.

This lack of interaction between teacher education and the liberal arts was a continuing source of concern and controversy. Throughout the second half of the 20th century, there were increasingly frequent and acrimonious debates about the quality of teacher education, with particular emphasis on the lack of disciplinary knowledge among most prospective and practicing teachers. For example, in the late 1940s and early 1950s, a number of critics such as Mortimer Smith and Arthur Bestor published widely discussed books deploring the discipline-adverse aspect of teacher education.[27] As Smith explained, the "official philosophy" (i.e., child-centered progressive education) of most teacher training institutions at best ignored traditional subject matter and at worse disparaged it. Specifically, he declared, "Our teacher training colleges and the graduate schools of education in our universities are wholeheartedly devoted to methodology." Smith maintained that concerns about effectively teaching subject matter were simply outside the perspective of most schools and colleges of education.[28]

The often-repeated belief that, after Sputnik, American teacher educators and K–12 teachers rediscovered the liberal arts is erroneous.

In October 1957, the Soviet launch of Sputnik jarred educators and created a new opportunity for reconnecting the disciplines with pedagogy. Amid the panic about Sputnik, many social commentators and political leaders argued that the reason the Soviets were beating the United States in the "space race" was the poor quality of public schools. Responding to this criticism, and to the lure of federal money following the creation of the National Science Foundation and passage of the 1958 National Defense Education Act (NDEA), a number of professors from the liberal arts and social sciences entered the field of school reform. Almost all of their reform efforts stressed the importance of disciplinary knowledge in improving teacher education and classroom practice. By far the most famous of these initiatives was "Man: A Course of Study" (MACOS), an interdisciplinary curriculum created in the mid-1960s by Jerome Bruner and an amazingly diverse group of educators. Drawing on the skills and knowledge of anthropologists, folklorists, linguists, and psychologists, to name just a few of the backgrounds of the people involved in the project, MACOS promised to transform late elementary social studies (fourth or fifth grade) by getting children to address the question, "What is human about human beings?"[29] Using films, storytelling, and other novel pedagogical approaches, MACOS educators got children engaged with disciplinary content, for example, learning about how such people as the Bushmen of the Kalahari and the Netsilik Eskimos adapted to challenging environments and developed rich, distinctive cultures.[30]

Students and teachers responded enthusiastically to pilot versions of this curriculum, which seemed to offer a brilliant new approach to bridging subject matter and educational methods. Yet by the mid-1970s, MACOS had become a flashpoint of the emerging "culture wars." In 1970, for example, an evangelical minister in Lake City, Florida, denounced MACOS as "godless, humanistic, evolution-based, socialistic, and 'sensual in philosophy,' " claims that eventually impelled school district leaders to discontinue the program. Over the next few years, right-wing critics across the country made a concerted attack on MACOS, which essentially ended the use of the program entirely.[31]

While the highly politicized battle over MACOS was unusual in the post-Sputnik reform era, the lack of influence that such initiatives had on teacher education, curriculum content, or pedagogical strategies, unfortunately, was typical. Indeed, by the late 1970s, few of the discipline-based reform programs were still in use. In other words, the often-repeated belief that, after Sputnik, American teacher educators and K–12 teachers rediscovered the liberal arts is erroneous. In fact, the impact of the post-Sputnik reforms on such indicators of student performance as high school course taking in math, science, and foreign languages (key areas of NDEA) was minimal.[32] Discipline-based reforms did not take hold for a variety of reasons, but two factors stand out. First,

*David K. Cohen's article, "Learning to Teach Nothing in Particular," which appeared in the Winter 2010-2011 issue of *American Educator,* is available at **www.aft.org/pdfs/americaneducator/winter1011/Cohen.pdf**.

given that teacher education largely focused on methods (not disciplinary content), many elementary teachers did not have the liberal arts knowledge necessary to teach new curricula. Second, many of these programs did not provide adequate resources for professional development to aid the teachers in implementing the new materials.[33] As these reform efforts scaled down in the 1970s, few scholars on either side of the subject matter/pedagogical divide were eager to try again.

Nevertheless, economic and political developments in the late 1970s and early 1980s created the conditions for another opportunity for revising teacher education, this time with some promising and seemingly enduring results. In 1983, the U.S. Department of Education published *A Nation at Risk*, a short, powerful, and widely discussed critique of public education. This manifesto inspired a range of education reforms. Regarding teacher education, the authors of *A Nation at Risk* echoed critics from the past, declaring, "The teacher preparation curriculum is weighted heavily with courses in 'educational methods' at the expense of courses in the subjects to be taught." The authors added, "A survey of 1,350 institutions training teachers indicated that 41 percent of the time of elementary school teacher candidates is spent in education courses, which reduces the amount of time available for subject matter courses."[34] Implicit in such criticism was the question of whether schools and colleges of education were up to the job of preparing teachers for the challenges of the increasingly globalizing economy.

By far the most important response to this challenge came several years later when a small but influential group of scholars began researching the question, "What exactly do prospective and practicing teachers need to know?" Their answer was "pedagogical content knowledge" (PCK), an approach to teacher education that has gained momentum and influence to this day.[35] Advocates of PCK then and now seek to better understand the components of effective teaching and, thus, to improve the quality of teacher education. Like most previous critics of teacher education, the supporters of PCK demand that prospective and practicing teachers—including elementary teachers—have a strong background in the subjects they are going to teach. But they argue that such a background is not enough. In addition to subject-matter knowledge, scholars promoting PCK maintain that teachers also must find ways to communicate knowledge to others. Unlike prior initiatives to improve teacher education, this is not a call for simply better methods courses in schools of education. Rather, it blends content and pedagogy. As several prominent proponents of PCK explain, teachers "must have two types of subject-matter knowledge: knowledge of the subject field, and knowledge of how to help their students come to understand the field."[36] In many ways, these ideas draw from the work of Dewey as well as research done by cognitive scientists who became interested in schooling during the post-Sputnik era.

Yet PCK is unlike previous reform efforts in a number of important ways. Central to PCK is the belief that how teachers *represent* knowledge is a vital component of effective teaching. Representing knowledge is akin to what Dewey referred to as translating discipline-based knowledge into life-terms. As PCK advocates explain, effective teachers consistently seek better ways to "represent" or "transform" subject matter to make it accessible to their students: "These representations or transformations of subject matter take many forms—metaphors, analogies, illustrations, examples, in-class activities, and homework assignments."[37]

The beauty of paying attention to representing subject matter in this way is that representations can be researched, and those that are effective and efficient in increasing student learning can be taught to prospective and practicing teachers. In other words, PCK offers the possibility of changing the nature and content of schools and colleges of education by getting them to concentrate on reconnecting subject matter and pedagogy in ways that make a dramatic difference in how teachers teach.

Another striking difference between PCK initiatives and previous efforts to change teacher education is that the main proponents of PCK are largely faculty *within* schools and colleges of education. Many of them are among the most well-respected education researchers in the country.[38] Thus, they cannot be dismissed as outsiders who do not understand the challenges of teacher education.

Pedagogical content knowledge, a growing approach to teacher education, demands that teachers have a strong background in their subjects and find ways to communicate knowledge to others.

As exciting as PCK is, it could be much more powerful if teacher educators had a set K–12 curriculum as a foundation for their work. The heart of PCK is ensuring that teachers have mastered both the content they will teach and the best ways of teaching it. But without a common core curriculum, teacher educators interested in PCK must guess at what content teachers might teach and what representations are more effective in that teaching. Currently, with nothing more than vague standards to guide them, each school district is free to adopt or develop its own curriculum—or to ignore curriculum entirely (leaving it up to schools or individual teachers). As David K. Cohen has pointed out, this situation severely limits the effectiveness and efficiency of teacher preparation,[39] especially since there is no way to predict which teacher candidate will end up in which district or school. Some prospective teachers may need to be prepared to teach a prescribed curriculum and/or pedagogy; others may need to be prepared to write their own curriculum. If the new effort to develop PCK is to flourish, it must be guided by a common core curriculum.

E. D. Hirsch, Jr., has been arguing for over two decades for a coherent, discipline-based core curriculum that all students must follow. By implication, such a core curriculum could lead directly to a transformation of teacher education.[40] Once teacher educa-

tors know exactly what knowledge and skills prospective teachers will be required to teach in K–12 classrooms, they then can focus on instructing these prospective teachers in such approaches as PCK, approaches that would improve instruction and learning.

For more than a century, teacher educators and their colleagues in the liberal arts have failed to collaborate in linking two of the most vital aspects of the instructional experience—subject matter and pedagogy. Today, however, with the movement toward a common core curriculum and the growing influence of PCK in schools and colleges of education, we have before us a new and exciting opportunity to span the subject matter and methods divide. Realizing this opportunity will take a great deal of work, long-term commitments, and lots of goodwill. But if the last century of failed unilateral reforms teaches us anything, it is that both sides need each other and that even the widest street in the educational world can be bridged if colleagues on both sides agree to meet each other halfway. □

Endnotes

1. "Education: Change on 120th Street," *Time*, May 3, 1954.

2. Diane Ravitch, *Left Back: A Century of Failed School Reforms* (New York: Simon and Schuster, 2000), 162–201.

3. Simona Goldin, "Studenting: An Historical and Sociological Study" (PhD diss., University of Michigan, 2010), 24–80; and Paul G. Perrault, "The Evolution of Teacher Certification and the Qualifications to Teach in Four States, 1890–1930" (PhD diss., University of Michigan, 2010).

4. Geraldine Joncich Clifford and James W. Guthrie, *Ed School: A Brief for Professional Education* (Chicago: University of Chicago Press, 1988).

5. Marc A. VanOverbeke, *The Standardization of American Schooling: Linking Secondary and Higher Education, 1870–1910* (New York: Palgrave Macmillan, 2008).

6. Stephen Mucher, "Subject Matter and Method in the Preparation of High School Teachers: Pedagogy and Teacher Education at the University of Michigan, 1871–1921" (PhD diss., University of Michigan, 2003).

7. Mucher, "Subject Matter and Method," 105–135.

8. Robert Bullough cogently argues that some prominent teacher educators were still arguing for this approach in the early decades of the 20th century. Robert V. Bullough, Jr., "Pedagogical Content Knowledge circa 1907 and 1987: A Study in the History of an Idea," *Teaching and Teacher Education* 17, no. 6 (2001): 655–666.

9. Mucher, "Subject Matter and Method," 200, 213–244.

10. David L. Angus, *Professionalism and the Public Good: A Brief History of Teacher Certification* (Washington, DC: Thomas B. Fordham Foundation, 2001), 17.

11. During the 19th century and well into the 20th century, local school boards or county educational leaders often certified teachers after candidates for certification passed examinations on the subjects they were going to teach. Angus, *Professionalism and the Public Good*, 3–12; and Perrault, "The Evolution of Teacher Certification."

12. To make matters worse, "one study in 1933–34 reported that only 29.74 percent of all high school teachers in Kansas were teaching in their major, and in the smaller schools, the figure was only about 6 percent." Angus, *Professionalism and the Public Good*, 18.

13. Ravitch, *Left Back*, 162–201; and David F. Labaree, *The Trouble with Ed Schools* (New Haven, CT: Yale University Press, 2004), 129–169. On the continuing influence of "progressive" educational ideas on schools and colleges of education faculty, see Steve Farkas and Jean Johnson, *Different Drummers: How Teachers of Teachers View Public Education* (New York: Public Agenda, 1997).

14. Lawrence A. Cremin, *The Transformation of the School: Progressivism in American Education, 1876–1957* (New York: Alfred Knopf, 1961), 3–8.

15. John Dewey, "The Child and the Curriculum" (Chicago: University of Chicago Press, 1902), 24.

16. Dewey, "The Child and the Curriculum," 22.

17. Ravitch, *Left Back*, 162–198.

18. Jeffrey E. Mirel, *Patriotic Pluralism: Americanization Education and European Immigrants* (Cambridge, MA: Harvard University Press, 2010): 52–54; and Anne-Lise Halvorsen, "Back to the Future: The Expanding Communities Curriculum in Geography Education," *Social Studies* 100, no. 3 (May–June 2009), 115–120.

19. Anne-Lise Halvorsen, "The Origins and Rise of Elementary Social Studies Education, 1884 to 1941" (PhD diss., University of Michigan, 2006), 293–362; and Jared R. Stallones, *Paul Robert Hanna: A Life of Expanding Communities* (Stanford, CA: Hoover Institution Press, 2002).

20. Diane Ravitch, "Tot Sociology; Or What Happened to History in the Grade Schools," *American Scholar* 56, no. 3 (Summer 1987): 343–354.

21. Halvorsen, "Elementary Social Studies Education," 317, 321.

22. Halvorsen, "Elementary Social Studies Education," 317–319; and Ravitch, *Left Back*, 156–158. There was no reliable research to prove whether these topics and activities really engaged elementary pupils.

23. Stallones, *Paul Robert Hanna*, 168.

24. Stallones, *Paul Robert Hanna*, 3.

25. Halvorsen, "Elementary Social Studies Education," 317.

26. David K. Cohen, "Learning to Teach Nothing in Particular: A Uniquely American Educational Dilemma," *American Educator* 34, no. 4 (Winter 2010–2011): 44–45, www.aft.org/pdfs/americaneducator/winter1011/Cohen.pdf.

27. Mortimer Smith, *And Madly Teach: A Layman Looks at Public School Education* (Chicago: Henry Regnery, 1949); and Arthur Bestor, *Educational Wastelands: The Retreat from Learning in Our Public Schools* (Urbana: University of Illinois Press, 1985).

28. Smith, *And Madly Teach*, 21, 23, 62–82.

29. Peter B. Dow, *Schoolhouse Politics: Lessons from the Sputnik Era* (Cambridge, MA: Harvard University Press, 1991), 72, 79–80.

30. Dow, *Schoolhouse Politics*, 72–177. The focus on the Bushmen and the Netsilik was a deliberate break with the curricula promoted by Paul Hanna. Rather than beginning with "the familiar surroundings of home and neighborhood," MACOS rested on the belief that elementary students could be more engaged by studying things that were mysterious and new. Dow, *Schoolhouse Politics*, 80.

31. Dow, *Schoolhouse Politics*, 179. On other right-wing attacks on MACOS, see 185–228.

32. On the lack of change in high school course taking after NDEA and the growth of "general" science and math courses rather than such courses as chemistry and calculus, see David L. Angus and Jeffrey E. Mirel, *The Failed Promise of the American High School, 1890–1995* (New York: Teachers College Press, 1999), 116–120.

33. Dow, *Schoolhouse Politics*, 263–264. Robert Church and Michael Sedlak, *Education in the United States* (New York: The Free Press, 1976), 414–417.

34. National Commission on Excellence in Education, *A Nation at Risk* (Washington, DC: U.S. Government Printing Office, 1983), 22.

35. Scholars today frequently refer to this approach as relying on "specialized content knowledge for teaching." For some early examples describing PCK, see Lee S. Shulman, "Knowledge and Teaching: Foundations of the New Reform," *Harvard Educational Review* (Spring 1987): 1–22; and Helen Featherstone and Sharon Feiman-Nemser, "The Student, the Teacher, and the Moon," in *Exploring Teaching: Reinventing an Introductory Course*, ed. Helen Featherstone and Sharon Feiman-Nemser (New York: Teachers College Press, 1992), 75–78.

36. Suzanne M. Wilson, Lee S. Shulman, and Anna E. Richert, "'150 Different Ways' of Knowing: Representations of Knowledge in Teaching," in *Exploring Teachers' Thinking*, ed. James Calderhead (Sussex, UK: Holt, Rinehart, and Winston, 1987), 104–124; Bullough, "Pedagogical Content Knowledge"; and Labaree, *The Trouble with Ed Schools*, 163–166.

37. Wilson, Shulman, and Richert, "'150 Different Ways' of Knowing," 112.

38. They include such scholars as Robert Bain, Deborah Loewenberg Ball, David K. Cohen, Pam Grossman, Magdalene Lampert, Annemarie Palincsar, Lee Shulman, Suzanne Wilson, and Sam Wineburg.

39. Cohen, "Learning to Teach Nothing in Particular."

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Pedagogical Content Knowledge for World History Teachers

Bridging the Gap between Knowing and Teaching

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–EDITORS

BY LAUREN McARTHUR HARRIS AND ROBERT B. BAIN

We are conducting studies to determine what knowledge world history teachers need and how they can use it to plan instruction. Here, we report on a small but in-depth study designed to examine how four pre-service and six in-service world history teachers think about, organize, and make meaning of separate world historical events, for themselves and their students.*

The teachers were asked to organize a seemingly random stack of cards listing 18 historical events and concepts into a "big historical picture" by placing each card on butcher paper, adding labels, and drawing lines to connect events and give them meaning. While the participants sorted the cards, they talked aloud about their decisions, revealing their thinking. Teachers did the card sort twice: first, to capture their own understandings, and second, to explain how (or if) they might structure those events for instruction.

The differences among the 10 teachers were stunning. Although all the teachers drew connections or categorized events along temporal-spatial scales at some point or another, there were discernable differences in how the more experienced world history teachers built connections among events, constructed coherent historical narratives, related world historical content to students' understandings, and employed such conceptual devices as cross-cultural or temporal comparisons or examples as pedagogical tools for organizing instruction. The experienced world history teachers not only constructed complicated conceptual maps with more multiple and fluid connections among events, but also, although not prompted to do so, began to classify events as global, cross-regional, or regional, and to explain connections among events situated at the different scales. For example, Figure 1 (on page 14) shows the initial card sort by the most experienced teacher. He filled the space between cards with connecting lines and/or language to show dynamic relationships among and between events, regardless of their region, time period, or scale.

The inexperienced world history teachers were more likely to simply place the cards in chronological order or within categories, such as economic or governmental groupings. Because some drew connecting lines between categories, such as government and economy—but not among the events—it appears that the categories became more important than the events (see Figure 2 on page 15).

The key difference between the novice and experienced teachers appeared to be the teachers' knowledge of global world history *and* their ability to attend to students' needs in learning world history, including likely misconceptions and points of interest. For example, one experienced teacher used some cards twice in his instructional organization, explaining that students needed a big picture of the global story at the beginning of his course and that they would later return to those same events to study them in more depth (see Figure 3 on page 16).

Beyond the type of history courses typically taken by history majors, history teachers need courses offering the knowledge and skills needed to create coherent and flexible organizational schemes. Knowledge of both particular events and possible connections spanning centuries, millennia, nations, continents, and hemispheres seems to enable teachers to develop and teach more meaningful connections. □

Lauren McArthur Harris is a postdoctoral research fellow at the University of Michigan and a former high school world history teacher. Robert B. Bain is an associate professor in the School of Education and in the Department of History within the College of Literature, Science, and the Arts at the University of Michigan. Previously, he taught high school history and social studies for 26 years. *This article is adapted with permission of Taylor & Francis Group, LLC, www.taylorandfrancis.com, from "Pedagogical Content Knowledge for World History Teachers: What Is It? How Might Prospective Teachers Develop It?"* The Social Studies*, Volume 102, Issue 1, January 2011, pages 9–17,* *copyright 2011.*

*Lauren McArthur Harris, "Building Coherence in World History: A Study of Instructional Tools and Teachers' Pedagogical Content Knowledge" (PhD diss., University of Michigan, 2008).

Figure 1: The most experienced world history teacher's first card-sort map

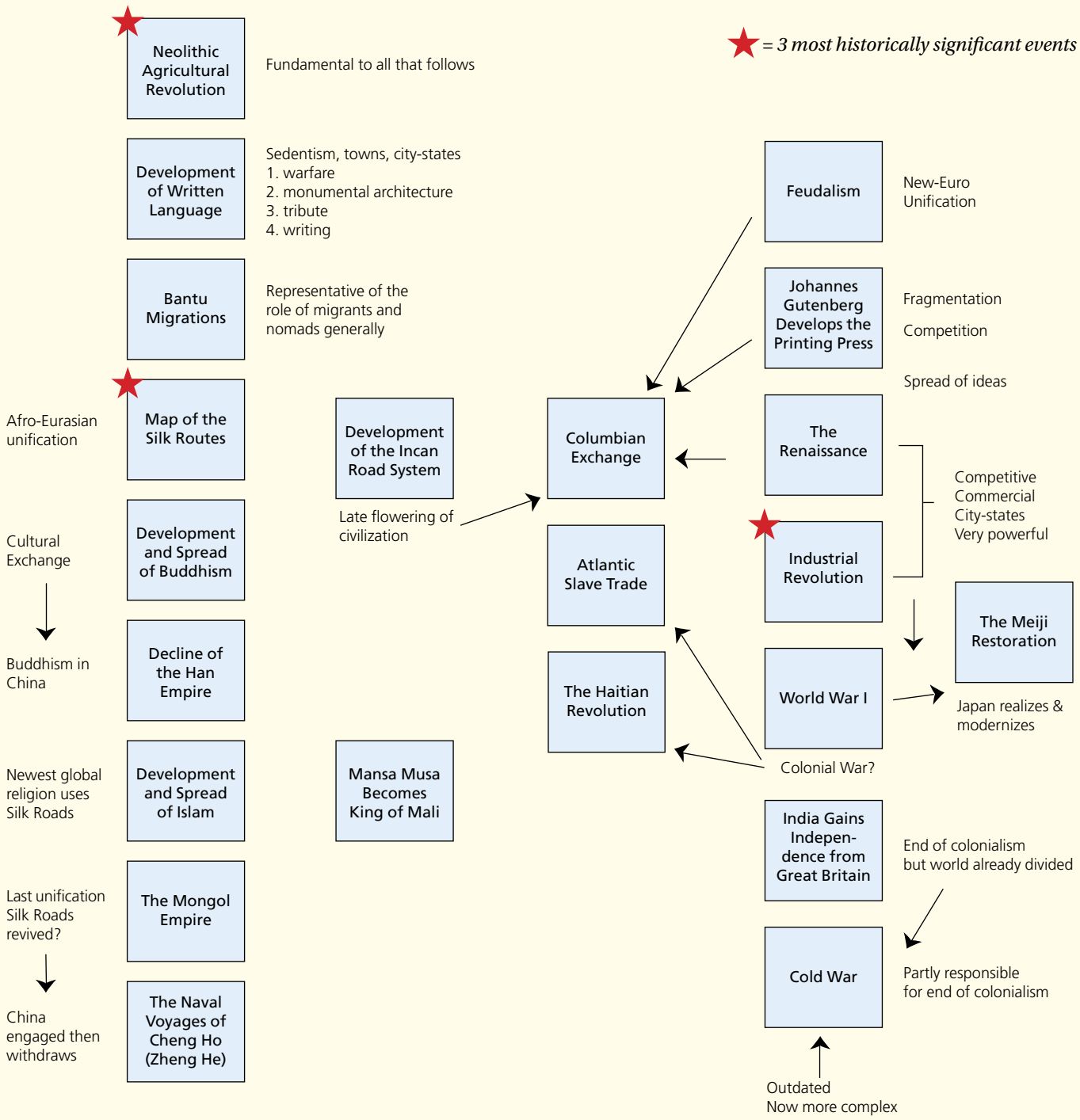


Figure 2: A novice world history teacher's first card-sort map

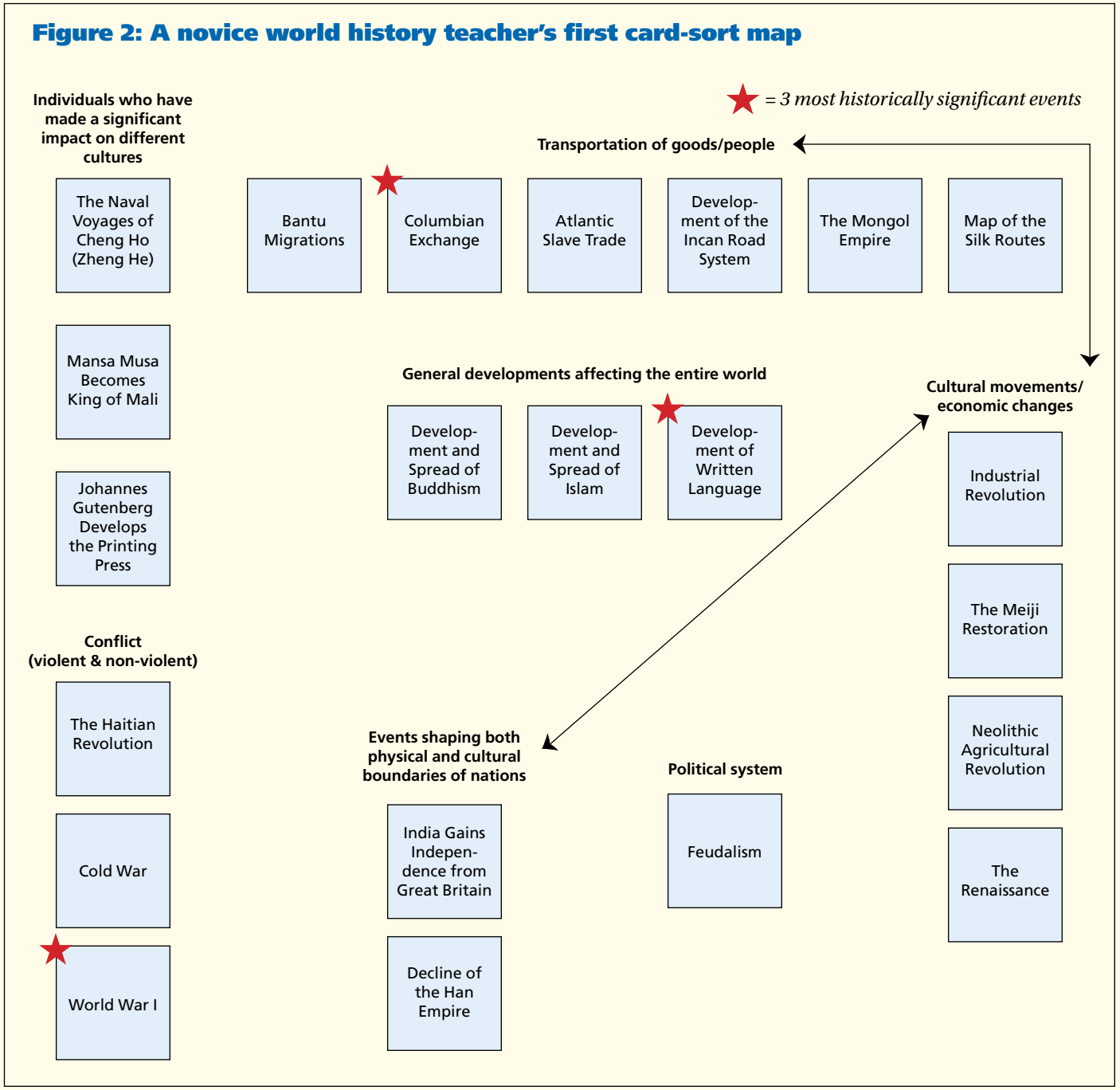
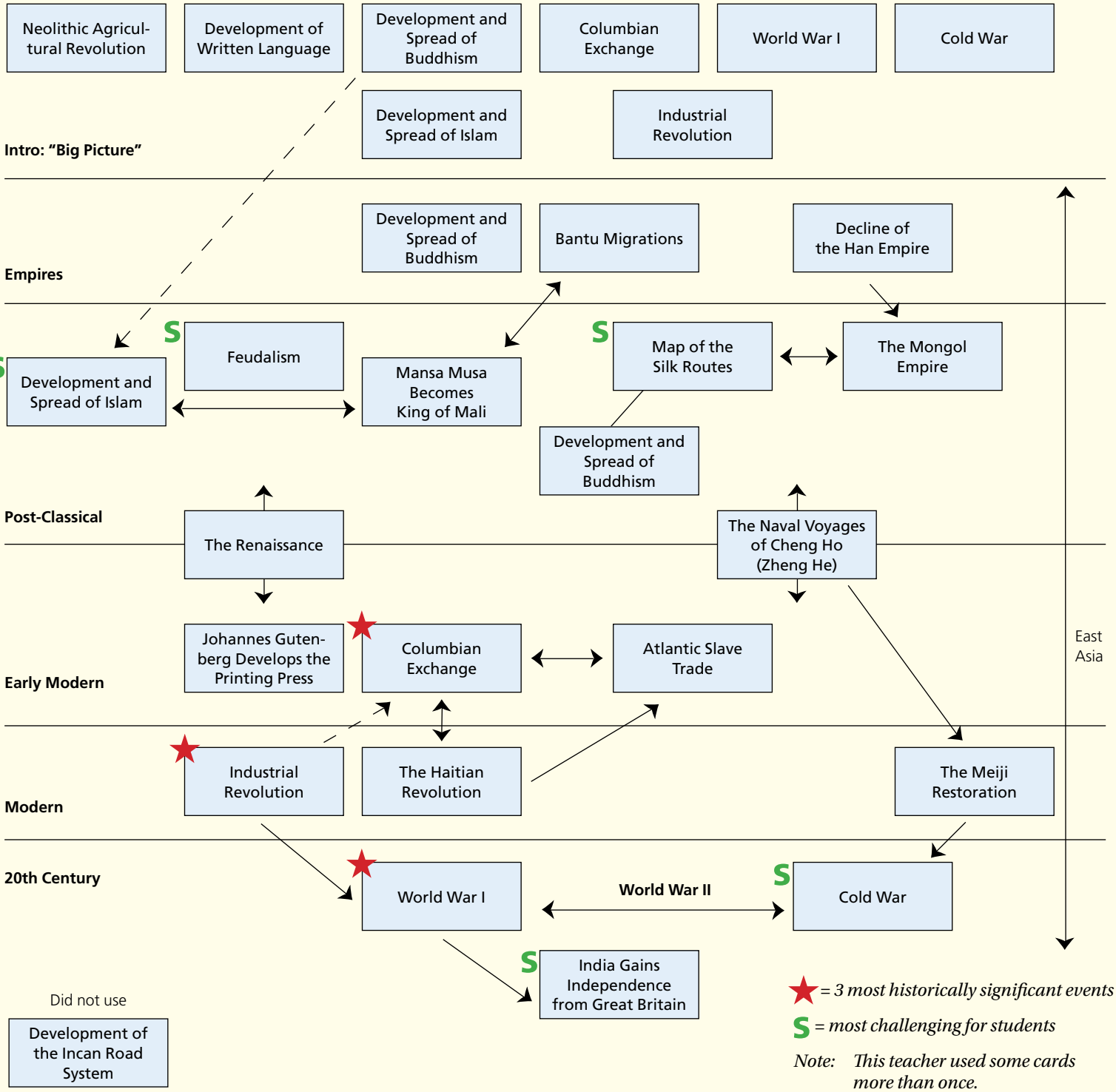


Figure 3: An experienced world history teacher's second card-sort map (instructional organization)



Building a Common Core for Learning to Teach

And Connecting Professional Learning to Practice

By Deborah Loewenberg Ball and Francesca M. Forzani

Americans expect more than ever from their schools. With an eye on "high-performing" nations, policymakers and education leaders in the United States worry about our global competitiveness and the need to prepare our youth for the demands of the knowledge economy. High school graduation requirements are becoming tougher, and new and more complex learning goals are being instituted. At the same time, our education system is underperforming in terms of both what it produces and for whom; it is a system that has never guaranteed or delivered high-quality education to all students.[1] In fact, it is not really a system at all: our schools vary significantly from one neighborhood to the next, there are more curricula than schools, and tests do not assess what students have been taught.[2]

Improving educational outcomes, and the schools responsible for producing them, requires attention to many interconnected factors, from standards, assessments, and curriculum, to parents, communities, families, social supports and services, and public resources.[3] Nonetheless, students' learning depends fundamentally on what happens *inside the classroom* as teachers and learners interact over the curriculum. Interventions must somehow affect these instructional transactions in order to affect students' learning. Yet most policy recommendations remain far from this educational fulcrum. Most policymakers are more

Deborah Loewenberg Ball is the dean of the University of Michigan School of Education, where she is also the William H. Payne Collegiate Professor and an Arthur F. Thurnau Professor. She has authored or coauthored over 150 publications, is an elected member of the National Academy of Education, and serves on the National Board for Education Sciences. Previously, she was an elementary classroom teacher for many years. Francesca M. Forzani is the associate director of the Teacher Education Initiative in the University of Michigan School of Education. Previously, she taught high school English for four years in the Mississippi Delta, where she was a Teach for America corps member. She also served on the staff of Teach for America's summer training institute for three years.

ILLUSTRATIONS BY ROLAND SARKANY

concerned with recruiting "better" teachers and developing new approaches to teacher evaluation and accountability than with building the infrastructure needed for high-quality instruction.[4] This strategy focuses on inputs (teacher "quality") and gauges its success based on outputs (student achievement gains), without connecting the dots to ensure that what students do with those "better" teachers leads to improved learning. Because "better" is defined by bets such as academic background or commitment, rather than demonstrated instructional capability, it is not surprising that this approach is neither reliable nor effective. It is a gamble, not a systematic strategy for intervening and improving learning and teaching inside classrooms. Because it is unreliable, some students win and others lose.

The Dynamics of Educational Improvement

Focusing directly on the development of instructional practice and its effects is not easy, however. One major shortcoming in our educational infrastructure has been the lack of a common curriculum. A second has been an impoverished approach to supporting teaching practice. These two are related, for any effort to develop and improve teaching is weakened when there is no agreement about what to teach.[5] Taken together—no agreed-upon curriculum and no system for developing skilled teaching practice—hope for instructional improvement is slim. In this article, we propose a departure from inherited ideas about instruction and its improvement. Our proposal shifts away from individual "style" and open-ended "learning from experience" as the building blocks of practice, and emphasizes instead the importance of common professional standards.

Most policymakers are more concerned with recruiting "better" teachers than with building the infrastructure needed for high-quality instruction.

Given the strong individualistic culture that permeates teaching and learning to teach in the United States,[6] why might a shift to shared specific standards for professional practice be possible? The Common Core State Standards, which specify a set of learning goals in mathematics and English language arts, represent a watershed for this country.* They offer the possibility of a common foundation on which a stronger educational infrastructure could be built. And more Americans now understand that skillful teaching is crucial for students' success. Skillful teaching can make the difference between students being at the top of the class or the bottom, completing high school or dropping out.

Of course, many policymakers seem to believe that good teaching is an innate skill or a creative act, not something one can learn to do. This is both false and—if it were true—hopeless. The teaching force numbers over 3.5 million. At this scale, thousands of *regular* people must learn to teach effectively. Even if some people teach effectively without training—and some do—there are simply not enough such "natural teachers" to fill every classroom in this country. And in the next few years, we will need about 1.7 million *new* teachers. We would like them to be skillful in helping students learn.

To face this challenge, some argue that we should make it easier for people to enter the classroom, let almost anyone try their hand at teaching, and, with rigorous systems of evaluation, weed out those who prove ineffective. Using tools of labor economics, others propose incentives to recruit "the best and the brightest" and salary schemes that pay for results. Although these strategies may sound sensible, none is sufficient to solve the core problem of ensuring that *every* teacher helps students succeed, because none focuses on the training and support needed to teach responsibly.

Teaching effectively depends on more than being smart and gaining experience. In no other skilled trade or profession would we leave performance so much to chance. We do not believe that flying an airplane, for example, depends on nothing more than a strong interest in and commitment to air travel, a dose of academic knowledge, and hit-or-miss experimentation on real passengers. Few people would travel on planes if such beliefs were the basis for pilots' training. Neither would they tolerate such haphazard preparation for the practice of hairdressers, veterinarians, or surgeons. Yet somehow it has been tolerated for the practice of teaching children. It is at least as dangerous, and more unethical.

Herein lies the crux of the challenge: improving educational outcomes for young people depends on developing and supplying skilled instructional practice. Such practice is complex and involves much that is not natural or intuitive. However, teaching is a large-scale occupation with high turnover.† Thus, we need a system that can enable large numbers of people to carry out this practice reliably and responsibly. For all children to experience high-quality instruction, we cannot depend on individual practitioners making it up based on personal preference and inventiveness. When teachers receive minimal preparation and are encouraged to follow their whims, children are put at risk. No profession or skilled trade that serves adult clients is so cavalier with preparation or so reluctant to set clear, shared standards of practice.

Ironically, this reluctance to specify skilled practice is a barrier to instructional improvement. The widely reinforced belief that teaching is a creative art, mostly learned on one's own, impedes the possibility of substantial growth in knowledge and improvement in practice. Collective knowledge, shared standards for practice, and common principles and protocols are the markers of a profession. Encouraged by the agreement on a common core of content for students' learning in mathematics and English language arts, we propose, in parallel, a common core curriculum for teacher preparation.

*To learn about these standards, see www.corestandards.org.

†Although many decry the fact that so many teachers leave the classroom after a few years, this is a complicated issue. In order to attract teachers, the occupation was designed to facilitate eased entry and, hence, weak occupational commitment.[7] Moreover, it was not designed to support professional advancement. To make teaching a long-term career for more people, more changes would be required than simply calling for better retention.

A Common Core for Teaching Practice

To improve the quality of teaching across the entire United States, educators must establish a common core of fundamental professional knowledge and skill that can be taught to aspiring teachers, across all types of programs and pathways. This common content should include knowledge and skills on which novices can be assessed reliably in order to make decisions about their readiness for independent practice and for advancement. It also should serve as the foundation for ongoing professional training.

This common core should focus directly on the development of instructional practice.[8] Although it should attend to the knowledge and orientations that underlie effective teaching, the academic training should support the demands of the actual work—what teachers need to know in order to practice effectively and make good judgments. If new teachers must be able to help students learn to evaluate sources and write persuasive arguments, explain the concept of gravity, develop young people's capacity for civic engagement, and diagnose pupils' difficulties with adding and subtracting fractions, then professional training must prepare teachers for these tasks, which are difficult to do well. Why would we ever think it reasonable for individual teachers to devise ways to carry them out on their own? Or for each new teacher to invent how to teach? If teachers fail to help significant numbers of their students learn, it may be because they do not receive sufficiently explicit professional training that would help them to do so. To blame the environment, the children, or their parents denies the efficacy of skilled professional practice and violates the fundamental ethical commitment of the teaching profession: to help every student succeed.

Along with our colleagues at the University of Michigan, we have worked for the past several years to identify a set of *high-leverage practices* that underlie effective teaching. We also have been developing ways to teach these practices so they can serve as the foundation for the curriculum used in a variety of pathways to teaching.[‡] We have defined high-leverage practices as "those activities of teaching which are essential; if they cannot discharge them competently, teachers are likely to face significant problems. Competent engagement in them would mean that teachers are well-equipped to develop other parts of their practice and become highly effective professionals."[9]

In working to articulate these high-leverage practices, we sought to shift teachers' training from an emphasis on knowledge and beliefs to a focus on judgment and action. A practice-focused curriculum for learning to teach would focus on the actual tasks and activities involved in the work. Such a curriculum would not settle for developing teachers' beliefs and commitments. Because the knowledge that matters most is that which is used in practice, the professional curriculum would emphasize repeated opportunities to do the interactive work of teaching and to receive feedback—not just to talk about that work.

The identification of a common core of high-leverage teaching practices requires a specific description of skilled teaching practice. The fields of teaching and teacher education often seem preoccupied with adjectives for describing practice that distract from deliberate attention to the logical and ethical obligations of skillful teaching. Labels such as "effective," "teacher directed," "culturally responsive," "inquiry-oriented," "ambitious," or "reform-oriented," for example, are attempts to anchor instruction in a set of worthy commitments but say little about its specific entailments. Some center on the connection to student learning (e.g., "effective," "ambitious") while others emphasize surface features (e.g., "teacher-directed," "reform-oriented"). But these terms are vague and can be misleading—instruction that attends closely to children's ideas, for example, often involves a substantial amount of work on the teacher's part and might therefore be labeled "teacher-centered" as reasonably as "child-centered." For the purposes of a core curriculum for learning to teach, we focus on *responsible instructional practice* keyed to a set of basic professional orientations.

To improve the quality of teaching, educators must establish a common core of professional knowledge and skill that can be taught to aspiring teachers, across all types of programs and pathways.

Defining Instructional Practice

The fundamental professional imperatives of teaching are to help students master academic knowledge and skill, and to support their social and emotional development. Schools are, for many children, the primary opportunity for academic learning.

By "academic learning," we do not mean a narrow collection of facts and procedural skills, assessed only by standardized tests. We mean conceptual understanding; the capacity for disciplined

[‡]To learn more about this work, which we call the Teacher Education Initiative, see http://sitemaker.umich.edu/tei/home.

reasoning, analysis, argument, and critique; and the ability to communicate ideas and interact effectively with others. Academic goals for students include critical and creative thinking, and the ability to solve problems related to local, national, and global issues. Students also must develop the ability to use and adapt to rapidly changing technology, and to interact effectively in a global society. All of this requires factual knowledge and procedural skills, but it also challenges students to review, apply, and expand what they have learned in substantive ways.

Responsible instructional practice means working assiduously to help all students reach these goals, and seeking to minimize educational inequities. This includes skill in selecting, representing, and opening content for a wide range of students from many different backgrounds; establishing sensitive, respectful, and helpful relationships with all students and their families; and resourcefully using students' out-of-school experiences. It is not enough for teachers to believe that all students are entitled to a high-quality education and that all students can learn; teachers must also have the skills to act on those beliefs in their teaching. Caring about students, although important, is insufficient for responsible practice. Skillful teaching involves facilitating in-depth analysis of ideas through reading, writing, and discussion; scaffolding students' knowledge and skill development through assignments and projects that require in-depth explanation, the sophisticated use of argument and evidence, and the strategic employment of technology; and encouraging growth in interpersonal skills through whole- and small-group work, oral argument, and other opportunities for social interaction.

Teachers must understand their subjects deeply and flexibly, and skillfully represent them in intellectually honest ways to a wide range of students.

The core work of instruction is to build bridges between students and the subject being studied. School subjects and children's ideas about them are, consequently, of primary importance. Teachers must understand their subjects deeply and flexibly, and skillfully represent them in intellectually honest ways to a wide range of students. Care with the subject matter is central to students' futures. If teachers are casual about the impressions that students draw about the nature of a subject, they may lessen students' engagement in the subject and detract from their learning. They may, for example, lead students to think that mathematics is not subject to reason, but is merely a series of mindless rules and formulas (or, just as bad, an endless game of guess and check). Similarly, if teachers are inattentive to important aspects of the ideas that they teach, students may develop misconceptions or distorted understandings of key concepts—many of which may interfere with the pursuit of more demanding learning goals later. An inadequately prepared history teacher, for instance, may gloss over debates about ideas or events, leading students to think that history is not subject to investigation and revision, but is just a series of dates to be memorized and irrelevant-seeming stories about white men. The responsibility to represent subject matter with integrity and care is at the heart of teachers' obligation to help students learn.

To facilitate learning, teachers must know their students well—not only their personalities and preferences, but also their ideas about subjects and their ways of thinking about them, including their intellectual habits, misconceptions, and interests. They must understand the ways in which students' personal and cultural backgrounds bear on their work in school and be able to respond with appropriate instructional activities. This means skillfully eliciting, probing, and analyzing students' thinking through verbal interactions and written work. It also means teaching students how to be "people who study in school"—learners who are disposed toward questioning, skilled argument and discussion, and intellectual honesty, particularly in relation to specific school subjects.[10] These are examples of what we mean by *high-leverage practices*.

Other Challenges: Lack of Knowledge, Grain Size, and Subject- and Context-Specificity

In addition to identifying the high-leverage practices at the heart of responsible teaching, constructing a common core for teaching presents other problems. Because the tasks and activities of responsible teaching are many and the time for teacher training and professional development is limited, we must identify those aspects of the work that are the most important for novices to learn to do well. Doing this requires addressing our collective lack of knowledge about teaching, questions of "grain size" (i.e., how detailed this work ought to be), and the subject- and context-specific nature of teaching practice.

Identifying the core elements of teaching requires a special "decomposition of practice,"[11] which is challenging because of our underdeveloped language of practice. From one teacher preparation program to the next and from one researcher to the next, the language used to describe teaching is neither precise nor com-

mon. For example, although teachers use questions continually, no set of technical labels exists for particular types of questions within a content domain. Questions that teachers use to elicit students' thinking—such as, "What have you found so far?" or "Can you explain how you got your answer?"—are different from ones they might use to challenge or extend their students' thinking—such as, "What if an older student said that 8/8 is greater than 5/5 because there are more pieces?" Similarly, even widely used words like "curriculum" and "scaffolding" mean different things to different people. A precise, shared technical language about instructional practice would enable much faster progress in research and thinking about teaching.

A related challenge is finding an appropriate grain size at which to identify and name the work of teaching. A high-leverage practice must be small enough to be clearly visible in practice, but not so small as to atomize it. In other professions, from aviation to medicine to cosmetology, professionals are trained to carry out specific elements of their work that have been articulated at a useful grain size. For example, prospective pilots are trained to execute takeoffs, landings, and turns, not just given basic advice; medical students are taught how to conduct a physical examination and dress a wound; hair stylists learn to precisely cut different textures and lengths of hair and to add highlights with care. Guidance for teaching practice, however, is often much less specific. Saying that teachers should "differentiate instruction" for different learners or "motivate" students or "connect with students' everyday experience" is to articulate principles or goals, not the detailed skills and steps required to achieve them.

In decomposing and naming high-leverage practices around which consensus could be built, another problem that must be faced is the content- and context-specific nature of teaching. Regarding the content-specific nature of teaching,[12] take, for example, the asking of questions. Precision about the purposes and framing of questions, as well as their real-time posing and sequencing, is a high-leverage practice. So is eliciting and interpreting students' understanding. However, both of these practices are tied intimately to specific subject-matter content. A good question in a history class is not the same as one in a mathematics lesson. History teachers ask students to evaluate the credibility of different sources and consider factors that shape their reliability. Mathematics teachers request and support mathematical explanations, which are not the same as either historical or scientific explanations. Asking students to explain why an odd number plus an odd number always equals an even number is different from asking a question about sources or about experimental results. Designing a prompt to assess students' developing abilities to write a comparative essay is different from constructing a task to elicit students' learning about a specific scientific idea, such as force or light.

Regarding the context-specific nature of teaching, a key issue is the unique cultural context of each classroom. Leading a whole-class discussion of themes in Toni Morrison's *Beloved* depends on context: because students' experiences and relationships to the text differ, the instructional work is not the same in a suburban Connecticut classroom as in a classroom in rural Mississippi. Students are likely to interpret the text differently, to interact differently with it and one another, and to react in distinctive ways to its language and imagery. Consequently, the resources available to and demands on the teacher would differ from one context to the next. Expectations and norms for communicating with parents and colleagues might also vary depending on the community in which a school is located and on the policy context bearing on a particular school system.

Toward a Common Core Curriculum for Responsible Practice

Whereas other professions have been able to decompose practice, agree on the most important knowledge and skills, and develop, support, and assess them, teaching has not. This is our challenge, and our time to overcome it is now.

We must identify the tasks of teaching that are so important that skillfully executing them is fundamental to effective teaching. Examples include being able to figure out and respond to what students say, launch a task in class, check quickly on students' understanding, conduct a class discussion, or call a parent about a difficult situation.

With a practice-focused curriculum for learning to teach, prospective teachers would learn to use high-leverage practices to teach high-leverage content, much of it derived from the Common Core State Standards.

In contrast, a high-leverage practice is the ability to recognize key patterns of thinking, ideas, and misconceptions that students in a specific grade level typically have when they encounter a given idea. Elementary mathematics teachers should be able to examine students' solutions to a complex subtraction problem and recognize how students arrived at their answers (right or wrong). Teachers must be able to probe whether correct answers represent valid understanding, and have good sense about when to check. Middle school English teachers should be able to recognize why some populations of students consistently use forms of subject-verb agreement that differ from academic English, and they should have effective strategies for teaching students how and when to use academic English. Elementary science teachers should know that the process of photosynthesis frequently confuses fifth-graders, and they should understand why. Not all common patterns of student thinking involve errors; teachers should be able to recognize common ways that students think about content, including predictable developments they make as they grow. For example, when young children begin to "count on" (i.e., know instantly that there are nine items when one is added to a set of eight that they have already counted, as compared with their earlier practice of counting all over again), teachers should immediately recognize this significant step. Teachers should also have relevant cultural and social knowledge. For instance, urban African American adolescents are likely to have deep experience of word play that can enhance their ability to engage in complex literary analysis,[13] and middle schoolers' social preoccupations

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Common Core for Teaching

(Continued from page 21)

can be harnessed for productive collective work.

In addition to high-leverage practices, we need to identify the content knowledge most important to competent beginning teaching and find ways to articulate professional orientations and commitments. Although instructional practice should be at the center, a common core for teaching practice would include explicit learning goals that encompass the range of skills, knowledge, understandings, orientations, and commitments that underlie responsible teaching. An important aspect of the curriculum for learning to teach would be the special kinds of content knowledge needed for teaching.[14]

Teaching is always about teaching *something*. Although the lack of a common curriculum in the United States has often discouraged teacher educators from focusing beginners' training on any particular academic content, the advent of the Common Core State Standards makes it possible to identify specific instructional practices, and specific topics and texts within school subject areas, that could serve as the foci of a redesigned professional curriculum for learning to teach responsibly. One way to approach choosing this content is to think again in terms of what is "high leverage" for beginning teachers. "High-leverage content" comprises those texts, topics, ideas, and skills in each school subject area that are essential for a beginning teacher to know well. High-leverage content is foundational to the ideas and skills of the K–12 curricula in this country, is taught in some form or another across most published textbooks and curricula, and appears frequently. In addition, high-leverage content is fundamental to students' learning and often causes difficulty if not taught well. It also is often known only superficially by prospective teachers, or is entirely new to them.* Examples of high-leverage content in elementary mathematics, for example, might include place value; computational procedures with whole numbers, decimals, and fractions; and mathematical explanation and representation. In secondary English language arts, it could include writing a coherent essay, and reading and analyzing *Romeo and Juliet* and *Invisible Man*.

With a practice-focused curriculum for learning to teach, prospective teachers would learn to use specific, high-leverage practices to teach specific, high-leverage content, much of it derived from the Common Core State Standards. They would also learn how to enact professional norms and commitments in the context of instruction (not just to talk about them). Although the full curriculum would vary in some ways from program to program, the focus on high-leverage practices and content would not. Our field has shied away from this kind of common core curriculum for new teachers for decades, with troubling results. There has never been a better time to change than now.

We hear a great deal about how much more respected and supported teaching is in other countries than in the United States. Here, teaching is paradoxically both romanticized and disdained. More important, though, is that teaching is broadly underestimated and teacher education, both "traditional" and "alternative," is the object of significant criticism. Demanding that the public respect teachers or defending the status quo, however, will not lead to improved systems for the development of responsible instructional practice.

Our goal is to support the demanding

*This definition of high-leverage content derives from the work of the Mathematics Methods Planning Group at the University of Michigan School of Education.

work of teaching. Doing this effectively means unpacking and specifying instructional practice in detail, and designing professional education that will provide multiple opportunities to fine-tune crucial design, interaction, and analysis skills. Other trades and professions have been able to break their work into meaningfully learnable skills and knowledge, accompanied by discriminating judgment. To move from individualism to professionalism in teaching, and improve the learning of all students, we must do the same. ❑

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