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The Realities of Out-of-Field Teaching

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The Realities of Out-of-Field Teaching

Abstract

Requiring teachers to teach classes for which they have not been trained or educated harms teachers and students.

Disciplines

Education

The Realities of Out-of-Field Teaching

Requiring teachers to teach classes for which they have not been trained or educated harms teachers and students.

The failure to ensure that all classrooms are staffed with qualified teachers is one of the most important problems in U.S. education. Dozens of reports and national commissions during the past decade have focused on this issue, and numerous initiatives have attempted to upgrade the quality and quantity of the teaching force. Reformers in many states have pushed tougher teacher-certification standards and more rigorous academic requirements for teaching candidates. A range of programs to recruit new candidates into teaching have sprung up, including programs for midcareer professionals, alternative certification programs, and Teach for America-like programs to lure the “best and brightest” into understaffed schools.

Highly qualified teachers may actually become highly unqualified if they are assigned to teach subjects for which they have little training or education.

Although these are all worthwhile reforms, such efforts alone will not solve the problem of underqualified teachers because they do not address some of the key causes. One of the least recognized causes is out-of-field teaching—when teachers are assigned to teach subjects that do not match their training or education. Highly qualified teachers may actually become highly unqualified if they are assigned to teach subjects for which they have little training or education.

Few stakeholders have recognized this problem, however, largely because of an absence of accurate data—a situation remedied with the release, beginning in the early 1990s, of the Schools and Staffing Survey, a major survey of elementary and secondary schools and teachers conducted by the U.S. Department of Education's National Center for Education Statistics. During the past seven years, I have been analyzing this survey to determine how much out-of-field teaching occurs and why it happens (Ingersoll, 1999).

My interest in this project stemmed from my experi-

ences as a secondary school teacher. Out-of-field teaching was commonplace in the public and private secondary schools in which I taught. My field was social studies, but hardly a semester went by in which I was not assigned to teach some classes in math, special education, or English. Teaching a subject in which one has little background or interest is challenging. I came to see that it also hurts the education process.

My experiences left me with questions: Were the schools in which I taught unusual in requiring out-of-field teaching? Or was it also a common practice in other schools? If so, why? The results of my research into these questions have been widely reported in the media and featured in the National Commission on Teaching and America's Future's *What Matters Most: Teaching for America's Future* (1996) and *Doing What Matters Most: Investing in Quality Teaching* (1997) and in Education Week's *Quality Counts* (1998). Other analysts have conducted statistical analyses of the same data and have reached the same conclusion: An alarming level of out-of-field teaching takes place in schools (Bobbitt & McMillen, 1995). But despite a growing awareness of this problem and its importance, it remains widely misunderstood.

A Widespread Problem

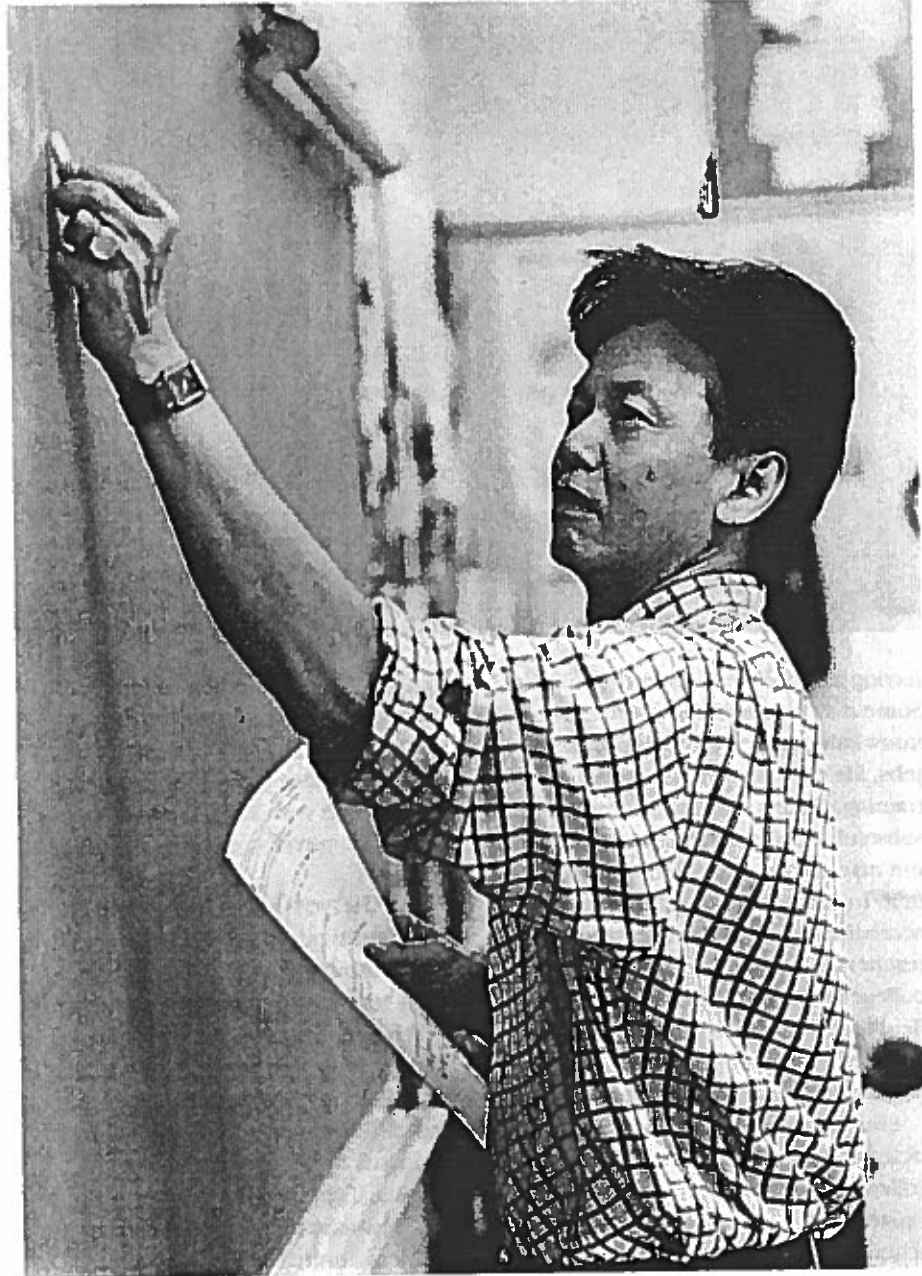
Research on the extent of underqualified teaching is difficult because there is surprisingly little consensus on how to define a *qualified* teacher. Few would argue that teachers ought not to be qualified; moreover, substantial evidence shows that teacher qualification is tied to student achievement (Greenwald, Hedges, & Laine, 1996). Nonetheless, controversy surrounds how much education, what types of training, and which kinds of preparation teachers ought to have to be considered qualified in any given field.

In my research, I have developed and used a number of different measures representing a range of standards. Some measures focus on whether teachers have a teaching certificate in the fields they teach, some focus on whether teachers have an undergraduate or graduate degree, and some focus on whether teachers have both a certificate and a degree in the fields they are assigned

to teach. Measures of out-of-field teaching also vary according to whether they focus on the number of teachers out of their fields or the number of students exposed to such teaching, and which fields, subjects, and grade levels are investigated (Ingersoll, 2001). The most commonly used measure of out-of-field teaching focuses on how many secondary school teachers do not have minimal academic credentials—neither a major nor a minor—in their assigned fields. Of course, some observers question the necessity of even these prerequisites and argue that a good teacher should be able to teach anything, regardless of education or training.

A college minor does not guarantee quality teaching or a qualified teacher. The assumption underlying my research is that adequately qualified teachers, especially at the secondary school level and in the core academic fields, ought to have, as a minimum prerequisite, a college minor in the subjects they teach. I assumed that few parents would expect their teenagers to be taught 11th grade trigonometry, for example, by a teacher who did not have at least a minor in math or math education, no matter how bright the teacher. Such out-of-field teaching, however, is all too common.

One-third of all secondary school math teachers have neither a major nor a minor in math or in such related disciplines as physics, engineering, or math education. Almost one-quarter of all secondary school English teachers have neither a major nor a minor in English or in such related disciplines as literature, communications, speech, journalism, English education, or reading education. The situation worsens for science and social studies. Teachers in these departments routinely teach a wide array of subjects outside their disciplines, but still within the larger field. As a result, more than half of all secondary school students enrolled in physical science classes—chemistry, physics, earth science, and space science—are taught by teachers who did not major or minor in any of these physical sciences. More than half of all

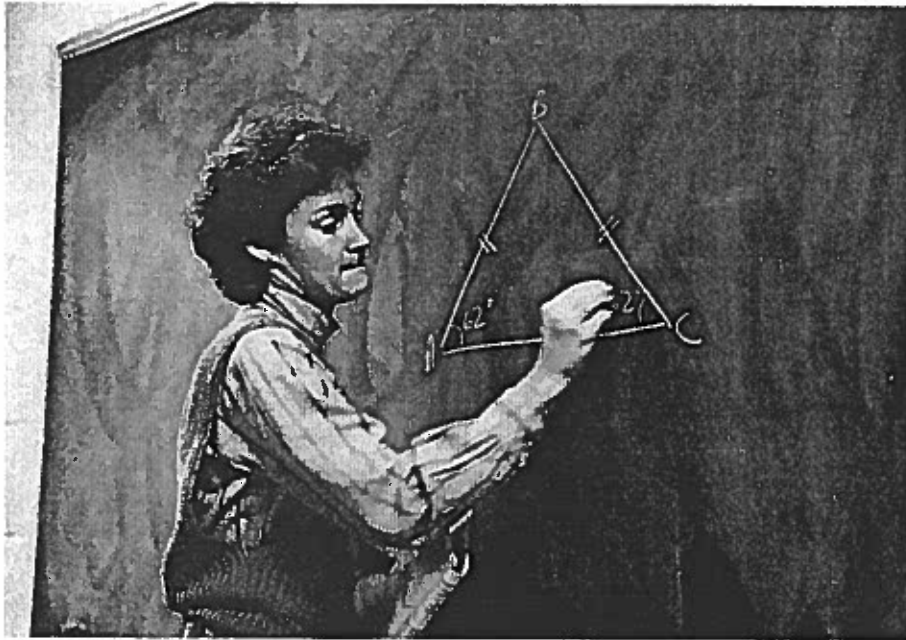


secondary school history students are taught by teachers with neither a major nor a minor in history. The actual number of students affected is not trivial. For English, math, and history, several million secondary school students a year in each discipline are taught by teachers who do not have a major or minor in the field.

Out-of-field teaching also greatly varies across schools, teachers, and classrooms. Recently hired teachers are more often assigned to teach subjects out of their field than are more experi-

enced teachers. Low-income public schools have more out-of-field teaching than schools in affluent communities do. Small schools have higher levels of out-of-field teaching. Junior high classes are more likely to be taught by out-of-field teachers than are senior high classes. There are also differences within schools: Lower-achieving classes are more often taught by teachers without a degree in the field than are higher-achieving classes.

No doubt some of these out-of-field teachers may be qualified, despite not



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having a minor or major in the subject. Some may be qualified by virtue of knowledge gained through previous jobs, life experience, or informal training. Others may have completed substantial college coursework in a field but may not have majored or minored in it. In some states, because school accreditation regulations require teachers to have at least 20 hours of college credit—at least 4 courses—in a field to teach it, many of those teachers assigned to teach out of their fields probably do have some background.

Even a moderate number of teachers lacking the minimal prerequisite of a college minor, however, signals the existence of a serious problem in our schools. The data clearly indicate that, no matter how it is defined, out-of-field teaching is widespread, taking place in more than half of all U.S. secondary schools in any given year. When I upgraded the definition of a “qualified” teacher to include only those who held both a college major and a teaching certificate in the field, the amount of out-of-field teaching substantially increased. Moreover, levels of out-of-field teaching have changed little over the past decade.

The negative implications of such high levels of out-of-field teaching are obvious. Is it any surprise, for example,

that science achievement is low, given that even at the 12th grade level, 41 percent of public school students in physical science classes are not taught by someone with a major or a minor in chemistry, physics, or earth science?

Why Out-of-Field Teaching?

The crucial question—and the source of great misunderstanding—is why so many teachers are teaching subjects for which they have little background. Many assume that out-of-field teaching is a problem of poorly educated teachers and can be remedied by more rigorous standards for teacher education and training. Typically, those subscribing to this view assume that the source of the problem lies in a lack of academic coursework on the part of teachers. They believe that requiring prospective teachers to complete an undergraduate major in an academic discipline or specialty would solve the problem.

My own case provides an illustration of just how misleading this view is. I graduated magna cum laude from the University of California with a bachelor's degree in sociology. Several years later, I took part in an intensive, year-long teacher certification program in social studies. None of this background, however, precluded me from later being assigned to teach out of my field

of social studies on a regular basis.

The data clearly show that the typical out-of-field teacher has both a bachelor's and a master's degree, is fully certified, and has substantial coursework in an academic specialty. The source of out-of-field teaching lies primarily not in the amount of education teachers have, but in the lack of fit between teachers' fields of training and their teaching assignments. Many teachers are assigned by their principals to teach classes that do not match their training or education.

The implications of this distinction are important for reform. The efforts by many states to toughen entry criteria, enact more stringent certification standards, and increase the use of testing for teaching candidates will not eliminate out-of-field teaching assignments, nor will they solve the problem of underqualified teaching in U.S. classrooms. In short, mandating more rigorous coursework and certification requirements will not help if large numbers of teachers continue to be assigned to teach subjects other than those for which they were educated or certified.

A second, and popular, explanation of the problem of out-of-field teaching blames teacher shortages. This view holds that shortfalls in the number of available teachers, caused by a combination of increasing student enrollments and a graying teaching force, have led many school systems to lower standards to fill teaching openings—the net effect of which is out-of-field teaching.

The data, however, show two problems with the shortage explanation for out-of-field teaching. First, shortages cannot explain the high levels of out-of-field teaching in such fields as English and social studies, which have long been known to have surplus numbers of teachers. Second, even when the rates of increased student enrollments peaked in the mid-1990s, only a minority of schools experienced trouble filling their job openings with qualified candidates. For example, less than one-tenth of secondary schools had any difficulty filling their openings for English teachers in 1993–1994; but in that same

year, a quarter of all public school English teachers were uncertified in English. Likewise, in that year only one-sixth of secondary schools reported problems filling their openings for math teachers, but a third of all math teachers had neither a major or minor in math (Ingersoll, 1999).

A Managerial Issue

Rather than suggesting deficits in the qualifications and quantity of teachers, the data point in another direction—that the source of out-of-field teaching lies in the way administrators manage schools and teachers.

Unlike other professionals, teachers have only limited authority over key workplace decisions. For example, teachers have little say about which courses they teach. The allocation of teaching assignments is usually the prerogative of school principals. The latter are charged with overseeing an ever-widening range of programs and courses with limited resources and staff. Moreover, principals' staffing decisions are constrained by teacher employment contracts that stipulate, for example, that in a typical secondary school, full-time teaching staff must teach five classes each day.

Within those constraints, principals do have an unusual degree of discretion in these decisions. Like other professions, teaching is subject to an elaborate array of state licensing requirements designed to ensure the basic preparation and competence of teaching candidates. Unlike other professions, however, there is little regulation of how teachers are employed once they are on the job. Teacher employment regulations are weak or rarely enforced, and most states routinely allow local school administrators to bypass these requirements (Robinson, 1985). For instance, in many states, teachers are only counted as out-of-field if they are misassigned for more than half their classes each day. Because most misassignments amount to less than half of a day, this way of counting out-of-field teaching effectively defines the problem out of existence. In this context, princi-

pals find that assigning teachers to teach out of their fields is often not only legal but also more convenient, less expensive, and less time-consuming than the alternatives.

For example, instead of finding and hiring a new part-time science teacher to teach two sections of a new state-

Few parents would expect their teenagers to be taught 11th grade trigonometry, for example, by a teacher who did not have at least a minor in math or math education.

mandated science curriculum, a principal may find it more convenient to assign an English teacher and a social studies teacher to each cover a section. If a teacher suddenly leaves in the middle of a semester, a principal may find it faster and cheaper to hire a readily available but not fully qualified substitute teacher, rather than conduct a formal search for a new teacher. When faced with the choice between hiring a fully qualified candidate for an English position or hiring a less-qualified candidate who is also willing to coach a major varsity sport, a principal may find it more convenient to choose the coach. The degree to which a school is faced with problems of recruitment or retention may shape the extent to which the principal relies on these options, but the data show that all schools have these options and that many use them.

Complex Work

The comparison with other professions is stark. Few people would want cardiologists to deliver babies, real estate lawyers to defend criminal cases, chemical engineers to design bridges or sociology professors to teach English. The commonly held assumption is that these professions require a great deal of skill, training, and expertise—hence, specialization is necessary. In contrast, the assumption underlying out-of-field teaching is that school teaching requires far less skill, training, and expertise than

these traditional professions and that specialization is less necessary.

Those who have spent time in classrooms, however, know that high-quality teaching requires a great deal of expertise and skill and that teachers are not interchangeable blocks who can be placed in any empty slot regardless of

their type of training. The best contemporary research has shown that good teaching entails a complex combination of art, craft, and science (Shulman, 1986). In short, the managerial choice to misassign teachers may save time and money for the school and for the taxpayer, but it is not without cost. ■

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