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A Researcher Encounters The Policy Realm: A Personal Tale

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Abstract
The failure to ensure that all of our nation’s classrooms are staffed with qualified teachers is one of the most widely discussed, but least understood, problems facing our elementary and secondary schools. In recent years, dozens of reports and reform initiatives have sought to solve this problem. Unfortunately, the array of recent efforts do not address some of its key causes.

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One of the least recognized of these unaddressed causes is the phenomenon known as out-of-field teaching — teachers assigned to teach subjects for which they have little preparation, education, or background. This practice makes even highly qualified teachers highly unqualified if, once on the job, they are assigned to teach subjects for which they have little background or preparation. But this seemingly odd and irrational practice has been largely unknown to the public and to policy makers.

One of the reasons the problem has been so little noted was an absence of accurate data. However, in the early 1990s, the release of the Schools and Staffing Survey (SASS) — a major new survey of the nation’s elementary and secondary teachers conducted by the U.S. Department of Education — remedied this situation. Working with this dataset, several of us discovered that for the first time we could accurately calculate how much out-of-field teaching there really is.

My interest in researching these issues originally stemmed from my previous experiences as a secondary
school teacher. Out-of-field teaching was commonplace in the schools where I taught. I was prepared in social studies, but hardly a semester went by in which I was not also assigned a couple of classes in such fields as math or special education. I found teaching subjects for which I had little background very challenging, and my experiences left me with a number of questions: Were the schools I taught in unusual in this regard? Or was out-of-field teaching a common practice in other schools? And, if so, why? As a researcher, I wanted answers.

There is a great deal of disagreement, often heated, over how much and what kinds of education and preparation teachers ought to have to be considered adequately “qualified.” Indeed, analogous to the much-discussed “reading wars,” it is probably not an exaggeration to refer to “teacher-quality wars.” In my research I decided to try to skirt this endless debate by adopting a minimal standard and focusing on the most compelling case. My primary focus became discovering how many of those teaching core academic subjects at the secondary level do not have at least a college minor in their teaching fields. Having a college minor, of course, does not guarantee that a teacher is qualified, but I viewed it as a minimal prerequisite. In short, I assumed that few parents would want or expect their teenagers to be taught, say, 11th-grade trigonometry by a teacher who did not have at least a minor in math or a related field, no matter how bright the teacher. I found, however, that this is often precisely what happens.

For example, the data indicated that over a third of all secondary school teachers who teach math do not have either an undergraduate or a graduate major or minor in math, math education, or some related discipline as engineering or physics. About one-third of all secondary school English teachers have neither a major nor a minor in English or in such related subjects as literature, communications, speech, journalism, English education, or reading education. In science, just over a quarter of all secondary school teachers do not have at least a minor in one of the sciences or in science education. Finally, about a quarter of social studies teachers are without at least a minor in any of the social sciences, in social studies education, or in history. Notably, other analysts also conducted statistical analyses of SASS and reached the same conclusion.

Beginning in the mid-1990s, I began publishing the results of my investigations in numerous pieces, ranging from brief op-ed essays to lengthy scholarly articles. The results captured widespread interest. The media began to report widely what I and other researchers were documenting, and the findings were also featured in the reports and documents of numerous education advocacy groups and frequently used by lawmakers, including even President Clinton. I found myself invited to address various groups. The research and data had a direct influence on the No Child Left Behind (NCLB) Act, which explicitly requires teachers to be competent in each of the academic fields they are assigned to teach.

At first glance, this story seems to be an example of successful data-based decision making and the use of “scientifically based” research to inform policy in education. The release of new data provided a first-time opportunity for researchers, the public, and policy makers to “discover” a little known but widespread problem. The data were disseminated widely and had — and still have — an influence on policy.

But, in some ways, this is not success story. Despite a growing awareness of the problem and its importance, out-of-field teaching remains, unfortunately, widely misunderstood.

For me, this professional experience has been both personally gratifying and personally frustrating. On the one hand, it can be gratifying and very flattering to see interest taken in, and use made of, one’s work and research. On the other hand, it can be very frustrating to see one’s work and research widely misrepresented and used to promote policies and remedies that are not supported by the data. The major area of misunderstanding has to do with what is perhaps the most crucial question: Why are so many teachers teaching subjects for which they have little background?

Many people assume that out-of-field teaching is a result of poor teacher preparation and education, especially a lack of academic coursework on the part of teachers. They further assume that the situation can be remedied by requiring prospective teachers to complete a “real” undergraduate major in an academic discipline or specialty.

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, with an additional concentration in history. Several years later, I returned to academe to take part in an intensive fifth-year teacher certification program in social studies. So I clearly had the background that policy makers would wish for. None of this background, however, kept me from being regularly assigned to teach subjects out of the field of social studies.

The truth is that almost all teachers in the U.S. have completed a college education, over 90% have full teaching certificates, and half have graduate degrees. The source of out-of-field teaching lies not primarily in the amount of education teachers have, but in the lack of fit between teachers’ fields of training and their teaching assign-
ments. In short, many teachers are assigned by their principals to teach classes that do not match their training or education. There is no question that the teaching force can benefit from upgraded education and training, but such reforms will do nothing to eliminate out-of-field teaching assignments. Hence, by themselves, they will not solve the problem.

A second 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 resort to lowering standards to fill teaching openings, the net effect of which is out-of-field teaching.

This seems to be a reasonable explanation, but it is only partly correct. It is true that demand for teachers has increased in recent years, that substantial numbers of schools report difficulties filling vacancies, and that these difficulties are clearly a factor that contributes to out-of-field teaching. But there are several problems with teacher shortages as an explanation for out-of-field teaching. First, shortages cannot explain the high levels of out-of-field teaching that exist in English and social studies, fields that have long been known to have teacher surpluses. Second, not all schools experience recruitment problems, and the data indicate that about half of all misassigned teachers are employed in schools with no such problem.

Why then is there so much mismatch and misassignment in our schools? The answer, I have concluded, lies in a close examination of the way schools are run.

Unlike members of traditional higher-status professions, teachers have only limited authority over key workplace decisions. The data show, for instance, that teachers have little say over which courses they are assigned, or misassigned, to teach. The allocation of teaching assignments is usually the prerogative of school principals. Principals not only have the authority to decide who teaches which courses, but they also have an unusual degree of discretion. In this context, some principals find that assigning teachers to teach out of their fields of expertise is more efficient and less expensive than the alternatives. For example, rather than trying to hire a new science teacher to teach a newly mandated science course, a school principal may find it more convenient and less expensive to assign a couple of English and social studies teachers to teach a class or two in science. Similarly, when faced with the choice between hiring a fully qualified candidate for an English position and hiring a less qualified candidate who is also willing to coach a major varsity sport, a principal may find it more expedient to do the latter. If a full-time music teacher is under contract, but student enrollment is sufficient to fill only half a day of music classes, the principal may find it cost-effective in a given semester to assign the music teacher to teach half a day of English classes, in addition to music.

All of these managerial choices to misassign teachers may save time and money for the school — and ultimately for the taxpayer — but they are not cost-free. Moreover, with the advent of NCLB, they have become illegal.

The comparison with traditional higher-status professions is stark. Few would require 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 such traditional professions require a great deal of skill and training; hence, specialization is assumed to be necessary. The prevalence of out-of-field teaching suggests that this assumption does not hold for elementary and secondary school teaching.

The policy implications of this alternative explanation of out-of-field teaching are clear. The way to make sure there are qualified teachers in every classroom is not to assume that the problem stems solely from a deficit in the preparation or the supply of teachers. Shifting the blame to teachers, colleges of education, or larger forces of supply and demand diverts attention from the way teachers are managed and mismanaged.

However, if assigning teachers to teach out of their fields has been a prevalent practice in school administration for decades because it is more efficient and less expensive than the alternatives, then eliminating it will not be easy and certainly won’t be accomplished simply by legislative fiat. Our analyses of the most recent data confirm this. Two years into NCLB — in the 2003-04 year — out-of-field teaching had declined very little from pre-NCLB levels. This is a discouraging finding, but perhaps also to be expected. In order to meet the goal of ensuring that all students are provided with highly qualified teachers, states will need to rethink how districts and schools go about managing their human resources — a tall order. There is a clear role here for scientific data and research, but I offer my experience with data on out-of-field teaching as a cautionary tale — one that, I hope, is not yet finished.

1. For articles and reports summarizing my research on out-of-field teaching, readers should visit www.gse.upenn.edu/faculty/ingersoll.html.
2. For a study of power and decision making in schools, see Richard Ingersoll, Who Controls Teachers' Work? Power and Accountability in America's Schools (Cambridge, Mass.: Harvard University Press, 2003).