



## A Different Approach to Solving the Teacher Shortage Problem

This Brief is based on the following CTP Research Report:

### Teacher Turnover, Teacher Shortages, and the Organization of Schools

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Few educational problems have received more attention in recent times than the failure to ensure that elementary and secondary classrooms are all staffed with qualified teachers. Over the past two decades, dozens of studies, commissions, and national reports have warned of a coming crisis resulting from widespread teacher shortages. This article briefly summarizes a recent study I undertook that used national data to examine the sources of school staffing problems and teacher shortages. This research shows that although these issues are among the most important facing schools, they are also among the least understood. The data also reveal that many currently popular reforms will not solve the staffing problems of schools because they do not address some of their key causes.

### Background

Since the early 1980s, education policy researchers have warned of the coming possibility of severe teacher shortages in elementary and secondary schools. These analysts have predicted a dramatic increase in the demand for new teachers, primarily resulting from two converging demographic trends: increasing student enrollments and increasing teacher attrition due to a “graying” teaching force. In this view, coming shortfalls of teachers will force many school systems to resort to lowering standards to fill teaching openings, inevitably resulting in high levels of under-qualified teachers and lower school performance.

As a result, the inability to staff classrooms with qualified teachers (hereafter referred to as school staffing problems) has received national media coverage and has motivated a growing number of reform and policy initiatives. The prevailing response to this school staffing problem has been to attempt to increase the supply of teachers. Over the past decade, a wide range of initiatives has been implemented to recruit new candidates into teaching. Among these are programs such as Troops to Teachers, designed to entice professionals into a mid-career change to teaching, and Peace Corps-like programs, such as Teach for America, designed to lure the “best and brightest” into understaffed schools. Moreover, many states have insti-



tuted alternative certification programs whereby college graduates can postpone formal education training and begin teaching immediately.

Concern over teacher shortages has also spurred research on teacher supply and demand issues. In particular there have been a large number of studies on *teacher turnover*, the term used to describe the departure of teachers from their teaching jobs. This body of research has focused on assessing which kinds of teachers are more or less likely to depart and why. Among the most important findings has been that teacher turnover is strongly affected by academic field. Special education, mathematics, and science are typically found to be the fields of highest turnover.

Another important finding has been that teachers' decisions whether to stay or leave the teaching profession are highly influenced by their age. Although there is some disagreement as to why this is the case, researchers have consistently found that younger teachers have very high rates of departure. Subsequently, as those remaining "settle in," turnover rates decline through the mid-career period and finally rise again in the retirement years. Moreover, because older teachers significantly outnumber younger teachers, many analysts have concluded that retirement due to a rapidly "graying" teaching workforce is the most significant factor behind teacher turnover, teacher shortages, and school staffing problems.

Few researchers, however, have sought to explain teacher turnover as a product of the characteristics of schools. Few have examined in detail what aspects of schools may be related to teachers departing. Although it is widely believed, for example, that urban, high-poverty public schools have high levels of teacher turnover, there have been only a small number of attempts to rigorously test this with nationally representative data or to examine what about these schools fosters turnover.

Additionally, most of this research has tended to emphasize only one component of the overall

turnover of teachers from schools: those who leave the teaching occupation altogether, usually referred to as *teacher attrition*. Researchers have often de-emphasized the other major component of turnover: those who move to different teaching jobs in other schools, usually referred to as *teacher migration*. This component is largely de-emphasized because it does not change the overall supply of teachers, as do retirements and career changes, and hence, is assumed to not contribute to teacher shortages and school staffing problems.

As a result of this limited view, much less is known of whether teacher turnover is disproportionately concentrated in particular types of schools and, also, which aspects of schools affect turnover. Moreover, little is known of how the organizational conditions of schools both impact and are impacted upon by turnover. In addition, about half of the overall turnover of teachers is migration from one school to another. Hence, the research emphasis on attrition from the occupation has meant that much less is known of the magnitude and causes of the totality of employment instability, turnover and mobility in schools, and their consequences for school staffing problems and teacher shortages.

One reason for these research limitations has been a lack of data, especially at the national level, on the extent of, types of, and reasons for teacher turnover. For example, some of the best known research on teacher attrition has used single-city or single-state data. Besides obvious limits to generalization, another key limitation of such data is that it is difficult to distinguish between teacher attrition from the occupation and teacher migration to teaching jobs in other cities or states because the latter "leave" the sampling frame.

It was partly in order to address these data shortcomings that the U.S. Department of Education's National Center for Education Statistics conducted the nationally representative Schools and Staffing Survey (SASS) and its supplement, the Teacher Followup Survey (TFS), beginning in the

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late 1980s. This is the largest and most comprehensive data source available on the staffing, occupational, and organizational aspects of schools and the largest and most comprehensive data source on teacher turnover in the U.S.

The SASS administers survey questionnaires to a random sample of about 55,000 teachers from all types of schools in all 50 states. In addition, one year later, the same schools are again contacted, and all those teachers in the original teacher sample who had moved from or left their teaching jobs are given a second questionnaire to obtain information on their departures. This latter group along with a representative sample of those who stayed in their teaching jobs comprise the Teacher Followup Survey. Unlike most previous data sources, the TFS includes teacher cross-school migration, teacher attrition from the occupation, the reasons teachers themselves give for their departures, and a wide range of information on the characteristics and conditions of schools.

## The Project

This study examined teacher turnover from a different perspective than most previous research on this topic. The objective of the study was to use the SASS/TFS data to examine teacher turnover and school staffing problems from an organizational perspective. Three related premises lie behind this perspective: (a) employee turnover is important because of its link to the performance and effectiveness of organizations; (b) fully understanding turnover requires examining it at the level of the organization; and (c) turnover is affected by the character and conditions of the organizations within which employees work.

First, from an organizational perspective, employee turnover is important because of its link to the performance and effectiveness of organizations. On the one hand, a low level of employee turnover is normal and efficacious in a well-managed organization. Too little turnover of employees is tied to stagnancy in organizations; effective organizations usually both promote and benefit from a limited degree of turnover by eliminating low-caliber performers and bringing in “new blood” to facilitate innovation. On the other hand, high levels of employee turnover are both cause and effect of performance problems in organizations.

Employee turnover is especially consequential in work sites, such as schools, which have “production processes” requiring extensive interaction among participants. Such organizations are unusually dependent upon commitment, continuity, and cohesion among employees and, therefore, especially vulnerable to employee turnover. Hence, from an organizational perspective, high turnover of teachers from schools is of concern not simply because it may be an indicator of sites of potential staffing problems, but because of its relationship to school performance. Moreover, from this perspective, high rates of teacher turnover are of concern not only because they may be an indication of underlying problems in how well schools function, but also because they can be disruptive in and of themselves for the quality of school cohesion and performance.

Second, from an organizational perspective, employee migration is as relevant as employee attrition. The premise underlying this perspective is that, whether those departing are moving to a similar job in another organization or leaving the occupation altogether, their departures similarly impact and are impacted upon by the organization. From the viewpoint of those managing at the organizational-level, employee migration and attrition have the same effect: in either case it results in a decrease in staff, who usually must be replaced.

Finally, teacher turnover and, in turn, school staffing problems cannot be fully understood without closely examining the characteristics of the organizations that employ teachers. In particular, understanding the sources of turnover requires examining the effect on turnover of such key organizational conditions as: the level of employee compensation; the level of administrative support, especially for new employees; the degree of conflict and strife within the organization; and the degree of employee input into and influence over organization policies. All these factors significantly affect employee turnover.

This study used this perspective to examine teacher turnover and school staffing problems. Its objectives were two-fold: first, to document the role of teacher turnover in the staffing problems of schools, and second, to closely examine the role of school characteristics and organizational conditions in teacher turnover. The results are summarized on the following pages.

## The Importance of Teacher Turnover for Teacher Shortages

The data show that the conventional wisdom on teacher shortages is partly correct but also errs in important ways because it overlooks the importance of teacher turnover for school staffing problems.

Consistent with shortage predictions, data show that demand for teachers has increased since the mid 1980s. Since 1984, student enrollments have increased, most schools have had job openings for teachers, and the size of the teaching workforce (K-12) has increased, although the rate of these increases began to decline slightly in the late 1990s. More important, substantial numbers of those schools with teaching openings have experienced difficulties finding qualified candidates to fill their positions.

But even at the peak of enrollment increases in the mid 1990s, only a minority of the total population of schools actually experienced recruitment and hiring problems in any given field. For instance, the data show that in this period, 35% of secondary schools had job openings for English teachers, and about one quarter of these indicated they had at least some difficulty filling these openings. But, even so, this represented only 9% of all secondary schools. Similarly, 34% of secondary schools had job openings for math teachers, and just under half of these indicated they had at least some difficulty filling these math openings—but this represented only 16% of all secondary schools. Likewise, 27% of all schools had job openings for special education teachers and just over half of these indicated they had at least some difficulty filling these openings—but this represented only 15% of all schools.

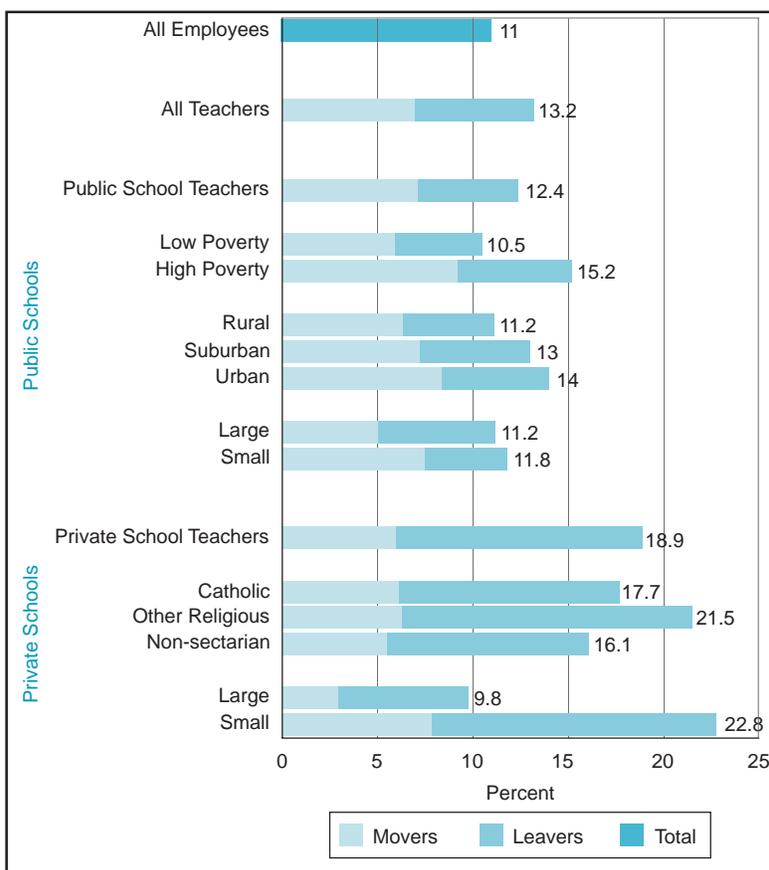
Moreover, for several reasons, the data suggest that these staffing difficulties were not due primarily to shortages in the conventional sense of an overall deficit in the pool of qualified candidates driven by enrollment and retirement increases. First, substantial numbers of schools have had staffing problems in fields such as English and social studies that have long been known to have overall surpluses. Second, the data indicate that the need to hire new teachers is not due primarily to student enrollment increases, but to teacher turnover. In recent years, well over 90% of new hires are simply

replacements for recent departures. Indeed, the occupational image that these data suggest is one of a “revolving door.” The relatively large flow in and out of schools can only be partly accounted for by student enrollment increases.

Teaching is a relatively large occupation; it represents 4% of the entire civilian workforce. There are, for example, over twice as many K-12 teachers as registered nurses and five times as many teachers as either lawyers or professors. Moreover, the rate of turnover appears to be higher than in many other occupations. One of the best known sources of national data on rates of employee turnover, the Bureau of National Affairs, has shown that nationwide levels of total departures across occupations have been quite stable over the past decade, averaging 11% per year. In contrast, the TFS data show that teaching has a relatively high annual turnover rate: 15% in 1988-89, 13.2% in 1991-92, and 14.3% in 1994-95.

Moreover, teaching is an occupation that loses many of its newly trained members very early in their careers. The data can be used to provide a rough estimate of the cumulative losses of beginning teachers from attrition in their first several years of teaching. The data suggest that after just three years 29% of all beginning teachers have left teaching altogether and after five years 39% have left teaching altogether.

But, not all of the flows out of schools result in a permanent loss of teachers. One form of this revolving door is represented by temporary attrition—teachers who leave teaching but return in later years. Another form is represented by migrants who move to teaching jobs in other schools. About half of the total teacher turnover is cross-school migration. Unlike attrition from the occupation, teacher migration is a form of turnover that does not decrease the overall supply of teachers because departures are simultaneously new hires. As a result, it would seem reasonable to conclude that teacher migration does not contribute to the problem of staffing schools. From a macro and systemic level of analysis, this is probably correct. However, from an organizational perspective, the data suggest teacher migration does contribute to the problem of staffing schools.



**Figure 1. Percent of employee turnover and percent of teacher turnover, by selected school characteristics**

From the viewpoint of those managing at the school-level, teacher migration and attrition have the same effect. Whether a teacher leaves the occupation or simply moves to another school, the school losing the teacher still most likely has to hire a replacement. When this occurs in large numbers, it creates staffing problems for the school. A sufficient teacher supply pool would, of course, ease replacement; however, the data suggest that an overall lack of supply is neither the sole nor the dominant factor behind staffing problems. The degree of staffing problems varies greatly among different types of schools even in the same jurisdiction, and schools ostensibly drawing from the same teacher supply pool can have significantly different staffing scenarios. Research has shown, for example, that in the same metropolitan area in the same year, some schools have extensive waiting lists of qualified candidates for their teaching job openings, while other nearby schools have great difficulty filling their teaching job openings with qualified candidates.

Moreover, the data also show that the revolving door varies greatly among different kinds of schools, as illustrated in Figure 1. For example, high-poverty public schools have higher turnover rates than do more affluent public schools. Interestingly, urban public schools have only slightly more turnover than do suburban and rural public schools. There are also not great differences in turnover between elementary and secondary schools.

More striking are the differences in rates of turnover according to the sector and size of the school. Private schools have higher turnover rates than public schools, and within the private sector, smaller schools have substantially higher rates of turnover than do larger schools.

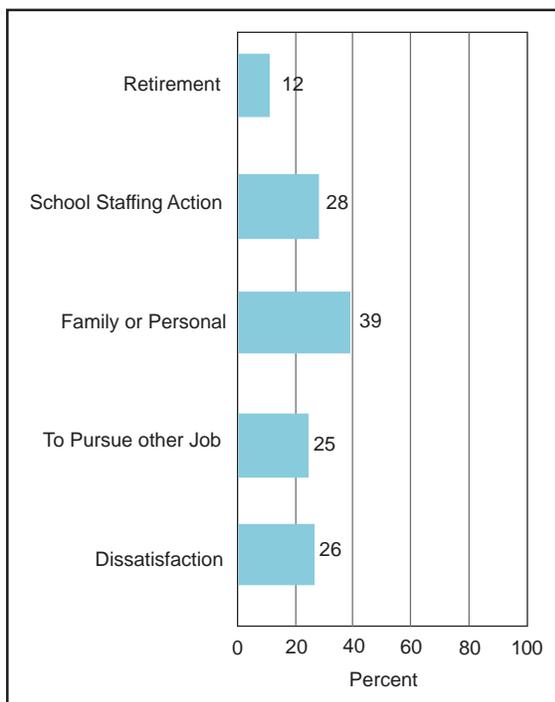
On one end of the continuum lie larger private schools with among the lowest average turnover rate—about 10%, or close to what is found in other occupations. On the other end of the continuum lie smaller private schools.

It should be noted that larger private schools represent only a small portion of all private school teachers, while smaller private schools represent 81% of all private schools and 56% of all private school teachers in the United States. In rates of turnover, smaller private schools have the highest average levels, about 23%. The turnover rate in these schools is significantly higher, for instance, than the rate in high-poverty public schools and more than double the national average for other kinds of employees.

These data raise important questions: why do teachers depart at such high rates, and why do these rates differ so dramatically among schools?

### The Sources of Teacher Turnover

In this study, I conducted extensive advanced statistical analyses to determine which characteristics of teachers and schools are correlated with the likelihood of teacher turnover, and I also closely examined data on the reasons teachers themselves gave for their turnover. The principal findings from these different analyses are summarized in Figure 2.



**Figure 2. Percent of teachers giving various reasons for their turnover**

Contrary to conventional wisdom, retirement is not an especially prominent factor. Retirement actually accounts for only a small part (12%) of total turnover. Of course, if one focuses on attrition alone (only those leaving teaching altogether), retirement is more prominent because, by definition, migration excludes retirement. Even in this case, however, retirement is not an especially prominent factor: it accounts for only a quarter of attrition (25%).

School staffing cutbacks due to layoffs, school closings, and reorganizations account for a larger proportion of turnover than does retirement. These staffing actions more often result in migration to other teaching jobs rather than in leaving the teaching occupation altogether. But the data also show that overall, staffing actions, such as retirement, account for only a small portion of total turnover from schools.

A third category of turnover—termed family or personal reasons—includes departures for pregnancy, child rearing, health problems, and family moves. These account for more turnover than either retirement or staffing actions, and the data also show these motives are common to all schools.

Finally, two reasons directly related to the working and organizational conditions of teaching are,

together, the most prominent source of turnover. Forty-two percent of all departures report as a reason either job dissatisfaction or the desire to pursue a better job, another career, or to improve career opportunities in or out of education. Those who depart because of job dissatisfaction most often link their turnover to low salaries, lack of support from the school administration, lack of student motivation, student discipline problems, and lack of teacher influence over decision-making. Interestingly, several factors stand out as not serious enough to lead to much turnover from schools: large class sizes, intrusions on classroom teaching time, lack of time to prepare and plan, lack of community support, and external interference regarding what is taught in the classroom.

### Implications

Since the early 1980s, educational policy analysts have predicted that shortfalls of teachers resulting primarily from two converging demographic trends—increasing student enrollments and increasing teacher retirements—would lead to problems staffing schools with qualified teachers and, in turn, lower educational performance.

This analysis suggests, however, that school staffing problems are not solely due to teacher shortfalls resulting from either increases in student enrollment or increases in teacher retirement. In contrast, the data suggest that school staffing problems are also a result of a “revolving door” through which large numbers of teachers depart teaching for reasons other than retirement.

The data show that teacher turnover is a significant phenomenon and a dominant factor driving demand for new teachers. The data show that, while it is true that student enrollments are increasing, the demand for new teachers is primarily due to teachers moving from or leaving their jobs at relatively high rates. Moreover, this analysis shows that while it is true that teacher retirements are increasing, the overall amount of turnover accounted for by retirement is relatively minor when compared to that resulting from other causes, such as teacher job dissatisfaction and teachers seeking better jobs or other careers.

These findings have important implications for educational policy. Supply and demand theory holds

that where the quantity of teachers demanded is greater than the quantity of teachers supplied, there are two basic policy remedies: increase the quantity supplied, or decrease the quantity demanded. As noted in the beginning of this paper, teacher recruitment, an example of the former approach, has been and continues to be a dominant approach to addressing school staffing inadequacies. However, this analysis suggests that recruitment programs will not solve the staffing problems of schools if they do not also address the problem of teacher retention. In short, this analysis suggests that recruiting more teachers will not solve staffing inadequacies if large numbers of such teachers then leave.

From the organizational perspective of this analysis, schools are not simply victims of inexorable demographic trends, and there is a significant role for the management of schools in both the genesis of and solution to school staffing problems. This analysis argues for a new approach to solving the school staffing problem: decrease the demand for new teachers by decreasing turnover. The data suggest that improvements in the conditions of the teaching job, such as increased support from school administrations, increased salaries, reduction of student discipline problems, and enhanced faculty input into school decision-making, would all contribute to lower rates of turnover, in turn, diminish school staffing problems and, hence, ultimately, aid the performance of schools.

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- See Teacher Turnover, Teacher Shortages, and the Organization of Schools, from the Center for the Study of Teaching and Policy at the University of Washington ([www.ctpweb.org](http://www.ctpweb.org)) for a full list of references.



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