Literature Review on Teacher Transfer and Turnover

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At A Glance

High rates of teacher turnover strain school districts' limited financial resources and are disruptive to program continuity and staff cohesion. Studies indicate that as many as 20 percent of teachers nationwide leave the profession after three years and close to 30 percent leave after five years. This report examines the reasons why teachers transfer or leave the profession at such high rates and where they go when they move or leave. The characteristics of teachers who move or leave and the types of schools they are most likely to leave are reviewed. Findings on the impact of working conditions and financial compensation on turnover rates, as well as policy recommendations for reducing teacher turnover, are also included. Finally, teacher retention in Miami-Dade County Public Schools (M-DCPS), the district's beginning teacher induction program, and financial incentives offered to M-DCPS teachers are summarized.

High rates of teacher turnover limit schools' ability to create productive learning environments and are disruptive to program continuity and staff cohesion. Less experienced staff increase the principal's administrative load and require increased supervision and curriculum oversight (Allen, 2005; Theobald & Michael, 2001; Krei, 2000; Croasmun et al., 1999; Montgomery County Public Schools, 1999).

Turnover also strains districts' limited financial resources (Allen, 2005; Ondrich, 2005; Darling-Hammond & Sykes, 2003; Fitz-ens, 1997). Benner (2000) estimated that teacher turnover costs districts 25 to 35 percent of employees' annual salaries, including the resources needed to recruit and hire new teachers, hire substitutes, and provide training and professional development for new teachers.

TEACHER TURNOVER RATES

Between the 1999-2000 and 2000-01 school years, the most recent years for which national data are available, 84.9 percent of teachers continued to teach at the same school in which they had taught the year before, 7.7 percent transferred to a different school, and 7.4 percent left the teaching profession. During the 1999-2000 school year, 17 percent of all teachers were new hires at their school. New hires included brand new teachers, transfers from other schools or districts, and former teachers who re-entered the profession after a hiatus from teaching. Most new hires (73 percent) were experienced teachers (either transferring or returning teachers) (National Center for Education Statistics, 2005; Provasnik & Dorfman, 2005; Luekens et al., 2004).

Studies indicate that as many as 20 percent of new teachers leave the teaching profession after three years and close to 30 percent leave after five years. Turnover rates for individual schools and districts are higher, as they include both movers (who transfer from one school or district to another), as well as leavers (who exit the profession temporarily or permanently). Fifty percent of teachers leave their initial assignment, but not necessarily the teaching profession itself, in the first five years of their career (Allen, 2005; Darling-Hammond & Sykes, 2003).

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WHY TEACHERS MOVE OR LEAVE

The most recent national data on teacher turnover come from two surveys sponsored by the United States Department of Education's National Center for Education Statistics: the 1999-2000 Schools and Staffing Survey and the related 2000-01 Teacher Follow-up Survey. The Schools and Staffing Survey asked a nationally representative sample of over 50,000 teachers about their work environment, classroom teaching, teaching qualifications, and other individual characteristics. The Teacher Follow-up Survey asked a representative sample of over 5,000 participants a series of follow-up questions about how their job had changed since the previous year.

As can be seen in Table 1, among teachers changing schools, the highest percentage rated an opportunity for a better teaching assignment (39.8 percent) as very important or extremely important in their decision to move to another school. Dissatisfaction with support from administrators (38.2 percent) and dissatisfaction with workplace conditions (32.1 percent) were other frequently provided responses (Luekens et al., 2004).

Among teachers changing schools, the highest percentage rated an opportunity for a better teaching assignment as very important or extremely important in their decision to move to another school.

Table 1. Percentage of Teacher Movers Who Rated Various Reasons As Very Important or Extremely Important In Their Decision to Change Schools, 2000-01*

Opportunity for Better Teaching Assignment	39.8%
Dissatisfaction with Support from Administrators	38.2%
Dissatisfaction with Workplace Conditions	32.1%
Changed Residence	22.8%
Better Salary or Benefits	19.1%
Dissatisfaction with Changes in Job Description or Responsibilities	18.7%
Higher Job Security	16.2%
Dissatisfaction with Opportunities for Professional Development	14.7%
Involuntarily Transferred	10.4%
Did Not Feel Prepared to Implement or Did Not Agree With New Reform Measures	8.9%
Did Not Have Enough Autonomy Over Classroom	8.2%

* Responses do not sum to 100 because respondents may have rated more than one reason as Very Important or Extremely Important in their decision to change schools.

Responses disaggregated by gender indicated that, compared to female teachers, a higher percentage of male teachers reported changing schools for a better salary or benefits, an opportunity for a better teaching assignment, more job security, and because they did not feel prepared to implement or did not agree with new reform measures. A higher percentage of female teachers reported moving to another school because they changed residences or were dissatisfied with their workplace conditions.

When examining responses by ethnic category, it was noted that Black teachers were more likely than Hispanic, White, and American Indian/Asian teachers to report changing schools for a better salary or benefits and because of dissatisfaction with their workplace conditions. Hispanic and White teachers were more likely to report changing schools for a better teaching assignment and Hispanic teachers, compared to teachers in all other ethnic groups, were more likely to report changing schools because they did not feel prepared to implement or did not agree with new reform measures.

When responses were examined by subject area specialty, it was noted that a higher percentage of science teachers reported changing schools for a better salary or benefits. Fewer arts and music teachers, compared to teachers of other subject areas, reported changing schools for a better salary or benefits. However, more arts and music teachers, compared to teachers of other subject areas, reported changing schools for a better teaching assignment (Luekens et al., 2004).

As can be seen in Table 2, among teachers leaving the profession, the highest percentage reported they retired (29.1 percent). A high percentage of leavers also stated that pursuing another career (20.6%) and a better salary or benefits (19.0 percent) were important reasons for leaving the profession (Luekens et al., 2004).

Table 2. Percentage of Teacher Leavers Who Rated Various Reasons As Very Important or Extremely Important In Their Decision to Leave the Profession, 2000-01

Retirement	29.1%
To Pursue Another Career	20.6%
Better Salary or Benefits	19.0%
Pregnancy/Child Rearing	16.5%
To Take Courses to Improve Career Opportunities Within or Outside of Education	14.7%
Dissatisfaction with Job Description or Responsibilities	13.1%
Changed Residence	11.0%
Dissatisfaction with Changes in Job Description or Responsibilities	11.0%
Health	10.5%
Did Not Feel Prepared to Implement or Did Not Agree With New Reform Measures	8.5%
School Received Little Support from Community	6.4%

* Responses do not sum to 100 because respondents may have rated more than one reason as Very Important or Extremely Important in their decision to change schools.

A comparison of male and female leavers found that a higher percentage of female teachers reported leaving the profession for pregnancy/child rearing and health reasons. Male teachers were more likely to report leaving for a better salary or benefits, to pursue another career, and to take courses to improve their career opportunities.

Responses disaggregated by ethnic group indicated that a higher percentage of Hispanic teachers, compared to teachers in other ethnic groups, reported leaving the profession to take courses to improve their career opportunities and because of a change in residence. More Black teachers reported

leaving the profession for a better salary or benefits, while more White teachers reported leaving to pursue another career, for pregnancy/child rearing, and for health reasons.

A comparison of leavers, by subject area taught, revealed that more math teachers, compared to teachers of other subject areas, reported leaving the profession because they changed residences. More social studies teachers and fewer elementary, language arts, science, and arts and music teachers reported leaving the profession for a better salary and benefits. More social studies teachers and fewer special education teachers reported leaving to pursue another career (Luekens et al., 2004).

WHERE TEACHERS GO WHEN THEY MOVE OR LEAVE

...teachers with less than five years of experience were more likely to move to another district than to move to another school within the same district.

Among teachers who stayed in the profession but changed schools or districts, 44.5 percent moved to a different school within the same district, 53.4 percent moved to a different school district, and 2.0 percent moved to a private school. When teacher moves were analyzed based on years of teaching experience, it was found that teachers with less than five years of experience were more likely to move to another district than to move to another school within the same district (58.3 versus 38.8 percent, respectively). However, teachers with five or more years of experience were almost equally likely to move to another district and to move to another school within the same district (50.5 versus 47.9 percent, respectively) (Luekens et al., 2004).

As can be seen in Table 3, among those who left the teaching profession following the 1999-2000 school year, 27.8 percent listed retirement as their main occupational status in 2001. Approximately 20.4 percent of leavers reported they were now working in elementary or secondary schools in an assignment other than teaching and 15.0 percent reported caring for family members (Luekens et al., 2004).

Table 3. Current Main Occupational Status of Teacher Leavers, 2000-2001

Retired	27.8%
Working in Elementary or Secondary School With Assignment Other Than Teaching	20.4%
Caring for Family Members	15.0%
Working in an Occupation Outside the Field of Education	12.3%
Working in an Education Occupation Outside of Elementary or Secondary Education	10.8%
Unemployed and Seeking Work	4.6%
Attending College or University	4.0%
Disabled	3.6%
Other	1.5%

Among those who left the teaching profession and whose main occupational status was working, 38.7 percent reported working as a local government employee, 31.5 percent reported working in a private company, 20.4 percent reported working as a state or federal government employee, and 9.2 percent reported they were self-employed. Almost 44 percent reported they received a better salary, 51.8 percent said they were more intellectually challenged, and 57.7 percent said they had more professional prestige in their current positions (Luekens et al., 2004).

Luekens, Lyter, and Fox's (2004) full report, *Teacher Attrition and Mobility: Results from the Teacher Follow-up Survey, 2000-01*, can be accessed online at http://www.nces.ed.gov/pubs2004/2004301.pdf. The report provides detailed data, based on the National Center for Education Statistics' Schools and Staffing Survey and Teacher Follow-up Survey, on teacher turnover rates, why teachers move or leave, and where they go when they move or leave.

CHARACTERISTICS OF TEACHERS WHO REMAIN VERSUS THOSE WHO LEAVE OR MOVE

Teaching Experience. There is strong evidence that teacher turnover is highest among beginning teachers. The likelihood of a teacher moving or leaving declines significantly after he or she has been in the classroom for four to five years. Attrition rates increase again after 25 to 30 years in the profession, as retirement age approaches. Studies conducted across the United States have corroborated this U-shaped pattern of attrition, with teachers in their middle years staying at the highest rates and those in their early and late years leaving at higher rates (Allen, 2005; Plecki et al., 2005; Provasnik & Dorfman, 2005; Buckley et al., 2004; Luekens et al., 2004; Hanushek et al., 2001; Texas Education Agency, 1995).

Teacher Age When Entering the Profession. Several studies have indicated that those who enter teaching at a more mature age are less likely to leave than those who begin teaching when they are younger (Allen, 2005; Provasnik & Dorfman, 2005). In a five-year study of teacher turnover in four midwestern states, Theobald and Michael (2001) found that teachers who entered the profession at age 30 or younger departed at significantly higher rates. Teachers who were 31 or older when they entered the profession were significantly less likely to depart.

Teacher Ethnicity. Findings on the influence of teacher ethnicity on turnover have been mixed. Luekens, Lyter, and Fox (2004) reported that national turnover rates, by ethnic group, ranged from 12.2 percent for American Indian/Alaska Native teachers to 18.3 percent for Asian/Pacific Islander teachers. Turnover rates were very similar for Black, Hispanic, and White teachers (15.7 percent for Black teachers, 14.6 percent for Hispanic teachers, and 15.1 percent for White teachers).

A study conducted in Washington state (Plecki et al., 2005) found that, after five years, Black and White teachers were retained at the same school at approximately the same rates. However, Theobald and Michael (2001), in their study of teachers in four midwestern states, found that Black teachers were significantly less likely than White teachers to leave the profession, but much more likely to transfer among districts. The Texas Education Agency (1995) reported that Asian and American Indian teachers had the highest rates of attrition.

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Teacher Gender. Studies have found that male and female teacher turnover rates are similar. A slightly higher percent of males remained teaching at their same school from 1999-2000 to 2000-01 (86.7 percent of males versus 84.3 percent of females). Six percent of male teachers moved to another school or district, compared to 8.3 percent of female teachers. An equal percent (7.4 percent) of male and female teachers reported leaving the profession (Luekens et al., 2004). In their five-year study of teachers in four midwestern states, Theobald and Michael (2001) found no significant differences in the percent of male and female teachers moving among districts or leaving the profession.

While turnover rates for men and women are similar, the reasons may be different. The exit pattern for males is more consistent with the traditional job search model and males who leave teaching are much more likely than women to be reemployed. Females are more likely to cite pregnancy and child rearing as reasons for leaving the profession (Allen, 2005; Podgursky et al., 2002).

Teacher Subject Area. Although most researchers have concluded that teacher turnover is strongly affected by academic field, the National Center for Education Statistics' Teacher Follow-up Survey data indicated that retention rates were similar across all subject areas (ranging from a low of 80.6 percent for arts and music teachers to a high of 86.5 percent for social studies teachers) (Luekens et al., 2004).

In their study of teachers in four midwestern states, Theobald and Michael (2001) found that math and science teachers (except biology) were more likely to leave teaching, but less likely to transfer among school districts. Physical education teachers were more likely to move between districts and physics teachers were least likely to move between districts. Differences in attrition rates between academic areas were attributed to the fact that the fields of math and science offer more attractive earning opportunities outside of teaching than other subject areas. Theobald and Michael (2001) also found that special education teachers were more likely to transfer to another school district, but not any more likely than teachers of other subject areas to leave the profession.

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Teacher Qualifications. Studies have shown that, nationwide, those who were teaching in a field in which they were certified were less likely to leave the profession than those who were teaching in a field in which they were not certified (Allen, 2005; Ondrich et al., 2005). Non-certified teachers also transferred to other schools or districts at higher rates (Provasnik & Dorfman, 2005).

Findings on the influence of academic degree attained on turnover have been mixed. Croasmun, Hampton, and Herrmann (1999) found that teachers who completed graduate work or obtained a master's degree stayed in the profession longer than other teachers. However, the Texas Education Agency (1995) reported that teachers with bachelor's degrees remained in the profession at higher rates than teachers with advanced degrees, with teachers holding doctoral degrees having the highest attrition rates.

There is some evidence that teachers with higher test scores are more likely to leave teaching. For example, Steinbrickner (2002, 2001) found that nationally, teachers with higher SAT scores were more likely to leave the profession in their early years of teaching. Podgursky, Monroe, and Watson (2002) concluded that Missouri teachers with higher ACT scores were more likely to leave the teaching profession. Murnane and Olsen (1990) reported that North Carolina teachers with higher teacher licensing examination scores were more likely to exit teaching.

CHARACTERISTICS OF SCHOOLS MOST LIKELY TO RETAIN TEACHERS

High Poverty Schools. Nationally, teacher turnover is 50 percent higher in high poverty schools than in more affluent schools (Allen, 2005; Ondrich, 2005; Provasnik & Dorfman, 2005; Ingersoll, 2001). Allen (2005) reported that 20 percent of teachers in high poverty schools have three or less years of teaching experience, compared with 11 percent in low poverty schools. Hanushek, Kain, and Rivkin (2004) found that Texas teachers tended to move from high to lower poverty schools. A recent report in Colorado found that, while the average turnover rate statewide between 2001 and 2004 was 20 percent, the 2002-03 turnover rate in 10 high poverty schools in the Denver district was 50 percent or higher (Allen, 2005). Finally, Plecki, Elfers, Loeb, Zahir, and Knapp (2005) reported that Washington state schools serving larger numbers of students in poverty retained fewer of their teachers after five years.

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Minority Student Populations. Research has shown that the higher the minority enrollment of the school, the higher the rate of teacher attrition among White teachers. In their study of Washington

state teachers, Plecki, Elfers, Loeb, Zahir, and Knapp (2005) concluded that teacher retention is related to the ethnic composition of the school's student population. Schools serving a greater percentage of white students tended to retain a higher percentage of their teachers at the same school after five years. Schools serving a larger proportion of Black students retained fewer of their teachers across the same time period. Similar findings were reported in Georgia and Texas (Scafidi et al., 2005; Texas Education Agency, 1995).

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Low Performing Students. Most studies have found that teacher turnover is greater in schools with low student achievement (Allen, 2005). Hanushek, Kain, and Rivkin (2001) found that teaching lower achieving students was a strong factor in decisions to leave Texas public schools. The magnitude of the effect held across the full range of teacher experience. Murnane (1984) reported that teachers with lower supervisor evaluations and whose students had lower test score gains were more likely to leave teaching after one or two years. It should be noted that Murnane examined only second and third grade teachers at one urban school district, so the results of his study may not be generalizable to other types of teachers or districts. Contrary to these findings, the Texas Education Agency (1995) concluded that retention rates were similar for teachers regardless of their students' performance. Teachers at schools where no students were tested had the highest mobility rates.

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Studies have found that the qualifications of teachers in schools with low performing students tend to be inferior to the qualifications of teachers in other schools (Allen, 2005). A North Carolina study found that low performing schools lagged behind other schools in their ability to attract highly qualified teachers (Darling-Hammond & Sykes, 2005). Analysis of data from Montgomery County Public Schools' (1999) database indicated that less experienced teachers were concentrated in schools with greater instructional challenges.

Urban Schools. Studies of teacher turnover in urban schools have produced mixed results. Several studies have found that urban schools have only slightly higher turnover rates than suburban schools (Ingersoll, 2002; Ingersoll, 2001). However, other studies have documented that urban teachers exit and transfer at higher rates than teachers at suburban schools (Darling-Hammond & Sykes, 2003; Hanushek et al., 1999). Theobald and Michael (2001) found that teachers in urban districts in four midwestern states, regardless of gender, ethnicity, age, or degree status, were significantly more likely to move out of their district, but were no more likely to leave the teaching profession than suburban and rural teachers. A study of turnover rates in the New York City region found that 38 percent of urban school teachers were teaching in the same school five years later, compared to 46 percent in suburban schools (Lankford et al., 2002). In Texas, probationary urban teachers were more likely to leave teaching than those in suburban districts, while probationary suburban teachers were somewhat more likely to switch schools within their own district (Hanushek et al., 2001).

School Level. Findings on turnover rates by school level have been mixed. The National Center for Education Statistics' Teacher Follow-up Survey found very similar turnover rates for elementary and secondary school teachers (15.4 percent versus 14.8 percent, respectively) (Luekens et al., 2004). Ingersoll (2001) controlled for teacher and school characteristics and reported that secondary schools nationwide were less likely to experience turn over when compared to elementary schools.

In contrast to these findings, Ondrich, Pas, and Yinger (2005) concluded that secondary teachers in upstate New York were more likely to move to another school or district than elementary teachers. The Texas Education Agency (1995) reported that Texas teachers at combination level schools (Pre-K or K through 12) left the profession at the highest rates, while middle school teachers moved from school to school at the highest rates.

School Size and Class Size. Studies provide limited support for the conclusion that teacher turnover is more frequent in small schools when compared to larger schools (Allen, 2005). This finding was confirmed in Texas, where teachers who taught in the smallest schools, those with fewer than 150 students, had the highest rates of moving and leaving (Texas Education Agency, 1995).

The research on the effect of class size reduction on teacher turnover is inconclusive. Several studies have indicated that class size reduction reduces teacher attrition, but the actual impact reported is very small (Allen, 2005; Hanushek et al., 2001). Lankford, Loeb, and Wyckoff (2002) found that when teachers from New York state transferred to other schools, their classes contained, on average, two fewer students. A New Jersey Education Association study of teachers who left the profession early found that, among those who reported leaving because of poor working conditions, large class sizes were most frequently noted as adversely affecting the work environment (Wollmer, 2001).

IMPACT OF THE WORKPLACE ENVIRONMENT ON SCHOOLS' ABILITY TO RETAIN TEACHERS

Working conditions play a large role in teacher decisions to change schools or leave the profession (Darling-Hammond & Sykes, 2003). Among teachers nationwide who left the profession and reported working in non-teaching positions, more than half stated that the manageability of their workload, opportunities for professional advancement, autonomy or control over their own work, and general working conditions were better in their current, non-teaching positions (Luekens et al., 2004). In their reviews and analyses of national teacher turnover rates, both Allen (2005) and Ingersoll (2001) concluded that schools with greater teacher autonomy also have lower turnover rates.

Analysis of data obtained from surveys of California teachers found that perceived working conditions, ranging from large class sizes, problems with facilities, and multi-track and year-round schedules, were the strongest predictors of turnover, along with salaries (Loeb et al., 2003). Analyses of surveys of North Carolina teachers found a significant connection between teacher retention and working conditions. When asked about the primary factor in their decisions to leave or stay at the school in which they worked, 34 percent stated "working in a collegial atmosphere" and 27 percent stated working in a school "led by a principal with a strong instructional emphasis." Higher levels of satisfaction on questions related to professional development and empowerment were significantly related to teacher retention at the high school level, while satisfaction with professional development was significantly related to teacher retention at the elementary level (Center for Teaching Quality, 2004).

...teachers may choose not to work with low-income, minority, low performing students because of the poor working conditions often associated with the schools these students attend.

As noted above, studies suggest that teacher turnover is greater in schools with relatively high proportions of low-income, minority, and low performing students. Researchers have discovered, however, that school working conditions and student characteristics are often highly correlated. Therefore, teachers may choose not to work with low-income, minority, low performing students because of the poor working conditions often associated with the schools these students attend. Although it may appear that teachers are moving away from certain students, data from surveys of urban elementary school California teachers suggest that teachers do not avoid particular groups of students, but do avoid undesirable school environments. Teachers reported that working conditions were significantly more important to them than their students' ethnicity, socioeconomic status, or academic performance. In fact, teachers indicated that working in a clean and safe facility was more important than students' ethnicity, socioeconomic status, and academic performance and even more important than receiving an additional $8,000 in annual salary (Horng, 2005).

Ingersoll (2001) reported that national turnover rates were lower in schools with fewer student discipline problems. Education Week (2000) reported that beginning teachers with less than five years of

experience who reported dissatisfaction with student discipline were twice as likely to leave the classroom. In a national comparison of teachers who left the profession and teachers who moved to other schools or districts, Luekens, Lyter, and Fox (2004) reported that movers were more likely to report that student behavior was a problem (25 percent) than leavers (13 percent).

Research indicates that schools that provide greater administrative support have lower levels of teacher turnover (Allen, 2005; Ingersoll, 2001; Lippard et al., 2000). Luekens, Lyter, and Fox (2004) reported that, nationally, movers were more critical of their school's instructional leader than teachers who remained at their schools. For example, fewer movers strongly agreed that there was a great deal of cooperative effort among staff members, compared to those who stayed.

Luekens, Lyter, and Fox (2004) compared teachers nationwide who changed schools or districts with teachers who left the profession entirely. They found that movers were more critical of their instructional leader than leavers. Teachers who changed schools or districts were less likely to report that their instructional leader was very or extremely effective at communicating respect for teachers, encouraging teachers to change teaching methods if students weren't doing well, encouraging professional collaboration among teachers, and working with teaching staff to solve school or departmental problems.

Bolich (2001) reported that, according to national studies, 16 percent of the teachers who stated they left the profession because of "dissatisfaction with teaching" listed inadequate support from administrators as the primary reason and 13 percent listed lack of respect from administrators as the primary reason. In a study of novice teachers in Texas, nearly 20 percent reported they left teaching after their first year because of lack of professional support. A study in North Carolina revealed that 63 percent of teachers who left the profession said that a lack of administrative support was a factor (Bolich, 2001).

IMPACT OF FINANCIAL COMPENSATION ON TEACHER RETENTION

Numerous studies have documented the influence of salary on rates of teacher turnover (Ondrich et al., 2005; Ingersoll, 2001; Murnane et al., 1991; Murnane & Olsen, 1990; Murnane & Olsen, 1989). Researchers have consistently found that teachers who were paid lower salaries were more likely to leave than those who were paid higher salaries. Ingersoll (2004) reported that approximately half of the teachers who left the profession nationally cited poor salary as a factor and approximately two-thirds said that better salaries would encourage teachers to stay in the profession. The Texas Education Agency (1995) found that the effect of compensation was especially strong in the early years of teaching. Over 26 percent of teachers receiving lower salaries left after their first year of teaching, compared to 17 percent of those receiving higher salaries.

While research provides strong support for the conclusion that higher compensation increases the rate of teacher retention, this relationship is not a simple one. Compensation seems to have a varying impact on retention, depending on other factors such as teachers' years of experience, qualifications, and job satisfaction. There is also evidence that, in some cases, working conditions may be more important than salary as a factor in teacher turnover (Allen, 2005; Horng, 2005). A survey of Tennessee teachers (Lippard et al., 2000) asked what the major factor was in their decision to move from one district to another. Although salary was found to be the most influential factor (selected by 22 percent of teachers), the responses indicated that the vast majority of teachers (78 percent) cited another factor as being most influential in their decision to move to another district.

...working conditions may be more important than salary as a factor in teacher turnover.

Ingersoll (2001) concluded that teachers were more likely to leave high poverty schools because of working conditions (inadequate administrative support, limited authority to make decisions, and poor

student discipline policies) than because of salary. Similarly, Hanushek, Kain, and Rivkin (2001) found that teacher turnover in Texas was more strongly related to student characteristics than to salary differentials. Bolich (2001) reported on a Public Agenda Survey that asked teachers to choose between two schools in otherwise identical districts. Approximately 82 percent of the respondents stated they would prefer to teach in a school with strong administrative support. Approximately 17 percent said they would choose a school with significantly higher salaries.

Teacher turnover in Texas was more strongly related to student characteristics than to salary differentials.

Studies indicate that relative salary between districts is an important consideration. Raising salaries across-the-board in a district will not reduce transfers if neighboring districts offer higher salaries or similar compensation with better working conditions (Berry & Hirsch, 2005). Hanushek, Kain, and Rivkin (2001) concluded that, in Texas, salaries relative to those in other districts were strongly related to decisions to move from one district to another, but had little impact on teachers' decisions to leave the profession. This finding held across all levels of teaching experience.

While researchers believe that raising salaries can slow transfer and attrition, studies are inconclusive regarding the amount that salaries would need to be increased to significantly reduce turnover rates. Because teachers' decisions to leave the profession or transfer to another school or district are usually influenced by a complex set of factors, it has been suggested that raising salaries may not reduce turnover enough to be worth the expense (Allen, 2005).

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Simulations conducted in Wisconsin suggested it would take salary increases of at least 15 to 20 percent to reduce urban attrition rates to the levels observed in suburban schools and districts (Imazeki, 2004). An economic study conducted in Texas determined that teachers would have to be paid at least 50 percent more to teach in hard-to-staff schools (Hanushek et al., 2001). The authors concluded that bonuses at these levels would create a significant financial burden and still might not provide a sufficient incentive for teachers to remain at their school.

South Carolina offered experienced teachers bonuses of approximately $20,000 to work in the state's lowest performing schools. The state recruited only 100 of the 500 teachers needed in the first year of the program and only 108 teachers after four years (Southeast Center for Quality Teaching, 2003). A North Carolina program offering significantly lower bonuses produced different results. From 2001-02 until 2003-04, the state awarded annual bonuses of up to $1,800 to certified teachers of math, science, and special education in middle and high schools serving low income or low performing students. Results suggested that the bonus payment reduced mean turnover rates by 12 percent. Middle school teachers and experienced teachers showed the strongest response to the program, while high school teachers and teachers with less than 10 years of experience were less influenced by the bonus payment (Clotfelter et al., 2006).

POLICY RECOMMENDATIONS FOR RETAINING TEACHERS

There is no single solution for reducing teacher turnover. Studies suggest that salary increases alone are not enough to reduce attrition and mobility. Decision makers must determine which policies are most cost effective and most feasible, given local demographic and labor market considerations and the availability of resources in their state or district (Allen, 2005; Berry & Hirsch, 2005). Research indicates that the following measures can help reduce teacher turnover:

Implementation of Induction Programs. Induction programs are designed to provide support to beginning teachers as they make the transition into the classroom. Since research has shown that teachers leave the profession at the highest rates in the early years of their teaching careers, induction programs are needed to help new teachers become on-the-job learners. Beginning teachers need a

great deal of support as they learn to implement curriculum, teach and assess standards-based lessons, and address student needs. Although the content of induction programs varies greatly from district to district, most induction programs include features such as mentoring, orientation, and professional development sessions. Induction programs should provide the following (Berry & Hirsch, 2005; Darling-Hammond & Sykes, 2003; National Education Association, 2003; Sheldon, 2002; Croasmun et al., 1999; Texas Education Agency, 1995; Meir & Glass, n.d.).

- Informational meetings to familiarize beginning teachers with organizational practices, employment conditions, and school regulations.
- Instruction in practical classroom strategies, such as communication skills, discipline, and classroom management.
- Opportunities to engage in collaborative lesson design, reflection, goal-setting, and analysis of student work.
- Ongoing guidance and assessment by trained mentors.
- Encouragement to work with other beginning teachers to provide each other with professional and emotional support.

Research offers some evidence that induction programs increase the retention rates of beginning teachers. Studies have found that teachers with less than five years of experience who have not participated in induction programs are nearly twice as likely to leave the profession (Carroll, 2005; Darling-Hammond & Sykes, 2003; Bolich, 2001). One national study found an attrition rate of 15 percent for new teachers who had participated in induction programs, compared to 26 percent for those who had not (Henke et al., 2000). Allen (2005) cautions that the impact of induction programs is often a function of the specific type of program in which teachers participate, as well as the particular school and district in which they teach. Therefore, induction may be of much greater benefit for some populations of beginning teachers than for others.

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Restructuring of Beginning Teachers' Workloads. Many states and districts have restructured beginning teachers' workloads so they have more time to collaborate with other teachers, pursue their own research interests, and reflect on the practice of teaching. The reasoning behind this concept is that more knowledgeable and professionally developed teachers will be better able to serve their students (Croasmun et al., 1999).

Schools should find ways to limit the demands placed upon new teachers' time, such as providing them with additional release and planning time or limiting their extracurricular responsibilities. Reduced teacher workloads and close matches between qualifications and teaching assignments also help to support new teachers. Beginning teachers should attend monthly professional development sessions and be encouraged to create individual development plans that outline their professional goals (Berry & Hirsch, 2005; Darling-Hammond & Sykes, 2003; National Education Association, 2003).

Improvements in the Working Environment. Research has shown that working conditions are an influential factor in teachers' decisions to leave or stay at their school. Studies suggest that implementation of the following practices can improve the working environment (National Education Association, 2003; Hare & Heap, 2001; Marquardt, 1994).

- Provide teachers with strong school leadership. Studies suggest that schools with administrative staff who offer supportive leadership attract and retain staff at higher rates.
- Include teachers in school-based decision-making instead of adopting a top-down administrative approach.
- Provide teachers with as much autonomy as possible in their classrooms. Because high-stakes testing has become so widespread, many teachers feel they have less influence over what their students learn and how they are taught.

- Address safety and discipline issues. Violent schools and undisciplined students often prompt teachers to move to another school or even leave the teaching profession.
- Organize schools into small learning communities where beginning teachers are treated like members of a community and can engage in ongoing inquiry, model best practices, and develop the knowledge and skills needed to help all students learn.

Provision of Financial Incentives. Studies suggest that targeted financial incentives can help reduce teacher turnover. Incentives can be used to encourage experienced teachers to increase their skills and expertise, take on additional leadership responsibilities, move to hard-to-staff schools, and remain in the classroom longer. Districts can offer an array of financial incentives, including (Berry & Hirsch, 2005; Carroll, 2005; National Education Agency, 2003):

- Bonuses for remaining in the district for a minimum number of years.
- Bonuses or targeted salary increases for teaching in hard-to-staff schools.
- Bonuses or targeted salary increases for teaching in critical demand subject areas.
- Bonuses for acquiring additional skills and knowledge.
- Bonuses for mentoring and assuming leadership responsibilities.
- Stipends for professional development and National Board Certification.
- Housing subsidies that require teachers to remain in the district for a minimum number of years.
- Tuition assistance and forgivable loans, contingent upon teachers remaining in the district for a minimum number of years.
- Enhanced retirement benefits that encourage experienced teachers to remain in the classroom.

Implementation of Enhanced Teacher Preparation Programs. Many new teachers leave the classroom because they were not adequately prepared to enter the profession in the first place. College and university teacher preparation programs teach candidates the skills and knowledge needed to succeed in the classroom. These programs should also assist candidates in their transition from the role of student to that of teacher by providing them with exposure to a variety of real-life classroom situations. Cultural awareness and sensitivity training should be included in teacher education programs so candidates are prepared to teach the diverse population of students represented in their community. Colleges and universities should provide ongoing support to recent teacher education graduates, including continued access to college faculty (National Education Association, 2003; Bolich, 2001; Croasmun et al., 1999).

A growing body of evidence indicates that better prepared teachers stay in the profession longer (Darling-Hammond & Sykes, 2003). The National Commission on Teaching and America's Future (2003) found that those who entered teaching without student teaching experience or preparation in areas such as instructional methods, child development, and learning theory left teaching at double the rates of those who received such training. Analysis of national survey data indicated that new recruits who were trained in child psychology, learning theory, and selecting instructional materials, who had practice teaching experience, and who received feedback on their teaching left the profession at rates half as great as those who did not have such preparation (Darling-Hammond & Sykes, 2003; Bolich, 2001). Similarly, a survey of 3,000 beginning teachers in New York City found that recruits who felt better prepared were more likely to stay in teaching (Darling-Hammond et al., 2002).

A longitudinal study of 11 institutions found that teachers who completed redesigned five-year teacher education programs entered and stayed in teaching at much higher rates than four-year teacher education graduates from the same campuses (Andrew & Schwab, 1995). Research on the University of California at Los Angeles' two-year post-baccalaureate customized teacher education program (in which much of the preparation

...teachers who completed redesigned five-year teacher education programs entered and stayed in teaching at much higher rates than four-year teacher education graduates from the same campuses.

occurs on site in urban schools and extensively prepares future teachers to meet the needs of racially, culturally, and linguistically diverse students) revealed that only 10 percent of the program's graduates left teaching after three years, compared with over 50 percent in most urban schools (Berry & Hirsch, 2005).

ON A LOCAL NOTE

Teacher Retention in Miami-Dade County Public Schools. The Florida Department of Education (FLDOE) collects information, by district, on departing teachers, their reasons for leaving the profession, and their future employment plans. A review of the responses from exit interviews with Miami-Dade County Public Schools (M-DCPS) teachers who left the district following the 2004-05 school year (the most recent school year for which data are available) follows. The reader is advised to interpret the data with caution. Exit interview responses are not based on a representative sample of those who left the profession. Since completion of the interview is not mandatory, many teachers choose not to participate in the interview process. Additionally, responses are collected at school sites and forwarded directly to the FLDOE. Therefore, the accuracy and validity of responses has not been verified.

According to the Teacher Exit Interview Information provided by the FLDOE, 199 teachers (less than one percent of the workforce) left M-DCPS after the 2004-05 school year. Ninety-one percent of the resignations were voluntary and nine percent were involuntary. As can be seen in Table 4, among those who left teaching voluntarily, relocation and family/personal reasons were selected by the highest percent of respondents as factors in their decision to leave M-DCPS.

Table 4. M-DCPS Teacher Exit Interview Information, 2004-05:
Reasons for Voluntary Separation from the District*

Relocation	38.7%
Family/personal reasons	32.6%
Other reasons	17.1%
Retirement	8.3%
Continuing Education	5.5%
Stress on the Job	3.9%
Inadequate Salary	2.8%
Dissatisfaction with Supervisor	1.1%
Resignation in Lieu of Termination	1.1%
Dislike of or Unsuitable for Assigned Duties	0.6%

* Responses do not sum to 100 because respondents were able to select more than one reason for leaving the district.

Exiting teachers were classified according to four broad categories of future employment plans: teaching; employment in education, other than teaching; employment outside of education; and none or not known.

- 25.6 percent of exiting M-DCPS teachers reported they would continue to teach (74.5 percent in another Florida district, 15.7 percent outside of Florida, and 9.8 percent in a nonpublic school).

- 14.6 percent of exiting M-DCPS teachers stated they planned to work in education, but not as a teacher (51.7 percent in another Florida district, 37.9 percent within M-DCPS, and 10.3 percent outside of Florida).

- 15.1 percent of exiting M-DCPS teachers reported they planned to work outside of the field of education (46.7 percent within Miami-Dade County, 33.3 percent in another Florida county, and 20.0 percent outside of Florida).

15.1 percent of exiting M-DCPS teachers reported they planned to work outside of the field of education.

- 44.7 percent of exiting M-DCPS teachers indicated they had no future employment plans or did not know where they would be employed.

The FLDOE's teacher exit interview data are available online at http://www.firn.edu/doe/eias/eiaspubs/reports.htm.

A study of teacher retention in M-DCPS, sponsored by the National Science Foundation, was conducted by the CNA Corporation (a not-for-profit research and analysis institute) (Hansen et al., 2004). The study analyzed the retention patterns of 6,429 M-DCPS secondary teachers at salary steps 10 and below in school years 1990-91 to 2000-01.

In 2000-01, the turnover rate for M-DCPS secondary teachers at salary steps 10 and below was 9.3 percent. When turnover rates were disaggregated by subject area, it was determined that science teachers were more likely to leave the district than math and other secondary teachers and that math teacher turnover was similar to that of other secondary school teachers. Turnover rates were 11.1 percent for science teachers, 8.4 percent for math teachers, and 9.1 percent for teachers of other subject areas.

Consistent with findings of other studies, the researchers determined that M-DCPS turnover rates were highest in the first few years of teaching and that, by the time teachers reached step 5 on the district's salary schedule, 40 percent of teachers had left the district. Turnover decreased as years of teaching experience increased. Teachers with an undergraduate major in an education-related field and teachers who earned their bachelor's degree from one of three universities within the state (Florida International University, Florida State University, or University of South Florida) had lower turnover rates. Additionally, turnover rates for teachers with master's degrees were higher than for teachers with less educational experience.

From 1990-91 to 2000-01, turnover rates for M-DCPS secondary teachers at salary steps 10 and below increased from 5.3 percent to 9.3 percent. Analysis of turnover rates by subject area indicated that math teachers' turnover rate increased from 3.1 percent to 8.4 percent and science teachers' turnover rate increased from 7.1 percent to 11.1 percent.

After controlling for teacher characteristics, the study's authors concluded that salary increases had only a small effect on retaining teachers. Math teachers appeared to be more responsive to salary increases than other secondary teachers. Further analysis determined that expected earnings for math teachers in non-teaching occupations were approximately 14 percent higher than those for science teachers and approximately 27 percent higher than those for teachers in other subject areas. Based on these findings, the authors suggested that teachers may be more likely to leave the profession when non-teaching occupations offer higher salaries.

The current study found that working conditions, high minority/high poverty student enrollment, and student test scores on state exams did not appear to have an impact on teacher retention rates. Two school characteristics that appeared to have a significant effect on teacher turnover were the number

of incidents of crime and violence per student and expenditures on at-risk students. M-DCPS teacher turnover increased when schools' crime and violent incidents and at-risk student expenditures increased.

M-DCPS teacher turnover increased when schools' crime and violent incidents and at-risk student expenditures increased.

Hansen, Lien, Cavalluzzo, and Wenger's full report on M-DCPS teacher retention, entitled *Relative Pay and Teacher Retention: An Empirical Analysis in a Large Urban District,* can be accessed online at http://www.cna.org/documents/IPR11020.1.pdf.

Induction Programs. M-DCPS implements an induction, or beginning teacher, program designed to reduce attrition by providing supportive services to teachers during their first year in the classroom. A three-year induction program, pending School Board approval, is planned for the 2006-07 school year. M-DCPS' Beginning Teacher Program includes the following components:

- New Teacher Orientation. A New Teacher Orientation is held each year prior to the opening of schools to provide beginning teachers with information on topics such as M-DCPS' curriculum, instruction, classroom management, fringe benefits, and certification.

- Mentoring. All beginning teachers are assigned a Professional Growth Team, consisting of two colleague teachers. The Professional Growth Team provides assistance to new teachers throughout the year and identifies appropriate professional development activities. In addition, retired teachers, curriculum support specialists, and National Board Certified teachers are assigned to mentor new teachers. The following mentoring programs are currently being implemented in the district:

    - The New Teacher Mentor Program. The program, funded by a grant from Washington Mutual, in partnership with The Education Fund, assigns retired teachers to serve as mentors at the district's most challenging schools. Mentors provide support to beginning teachers during a nine-week period for one-half day per week. All beginning teachers can request a retired teacher mentor by calling the New Teacher Helpline established by the Office of Professional Development.

    - New Teacher Center. As a participating district in a study sponsored by the United States Department of Education and conducted by Mathematica Policy Research, M-DCPS has received five full-time mentors. Each mentor assists 12 to 14 beginning teachers for a minimum of two hours per week.

    - Project Getting Assistance to Teach Effectively (GATE). GATE is a mentoring project that is a collaborative effort between the Dade/Monroe Professional Development Partnership, the Office of Professional Development, and the Division of Special Education. The project assigns mentors to newly hired special education teachers. Last year, 46 special education teachers participated in the project.

    - New Educators Support Team (NEST). NEST supports newly hired teachers by providing an opportunity for teacher collaboration and the establishment of professional learning communities. Participants model instructional strategies, share best practices, and receive on-going follow-up support. Participation in the program allows teachers to develop teaching strategies, work on specific areas of concern, and develop action plans to address these areas of concern. NEST sessions are facilitated by National Board Certified teachers and curriculum support specialists. Sessions are held in most feeder pattern schools throughout M-DCPS and are available to all new and early career teachers. Last year, 327 beginning teachers participated in NEST.

- Mentoring by Curriculum Support Specialists. Curriculum support specialists assigned to the Beginning Teacher Program provide mentoring and support to new teachers in Assistance Plus Schools, Zone and Stellar Schools, and schools with large numbers of new teachers. Curriculum support specialists provide professional development, conduct needs assessments, model lessons, and coordinate and assist with reading interventions.

- *The New Educator* Newsletter**.** *The New Educator* is a monthly newsletter containing multiple resources for new teachers to access online. The newsletter advertises available training, NEST sessions, and in-services that new teachers are required to attend. A monthly featured article focusing on literacy, educational tips, and a question and answer section are included. The newsletter also promotes the district's New Teacher Helpline and the Florida Department of Education's *Start With Success* Web site. The newsletter can be accessed at http://prodev.dadeschools.net/Instructional/NewTeacher/default.asp.

- Beginning Teacher Tool Box. The Beginning Teacher Tool Box provides online resources, such as practical tips, helpful articles, a catalog of educational resources, an "Ask A Mentor" section, *The New Educator* newsletter, and a discussion forum. The tool box can be accessed at http://prodev.dadeschools.net/Instructional/NewTeacher/default.asp.

- Closing of Schools Conference**.** The conference prepares new teachers for activities that occur during the last month of school. Last year, session topics included effective teaching strategies, classroom management, professional development plans, certification, and student services issues.

- Beginning Teacher Workshops. The Office of Professional Development provides professional development opportunities specifically designed for new teachers. Workshop topics include classroom management, instructional strategies, literacy, technology, and integrated curriculum.

Financial Incentives. The following financial incentives are offered to Miami-Dade County Public Schools (M-DCPS) teachers to help reduce teacher mobility and attrition:

- Teaching at Hard-to-Staff Schools. Teachers who opt to teach at one of M-DCPS' School Improvement Zone schools receive an annual salary that is 20 percent higher than the salary received by teachers at other M-DCPS schools.

- Teaching in Critical Shortage Subject Areas. Teachers working in critical shortage areas receive a stipend of $1,000 at the end of the school year and are hired to begin at Step 2, instead of Step 1, on the salary schedule. Step 2 is $171 higher than Step 1 on the 10-month salary schedule and $205 higher than Step 1 on the 12-month/School Improvement Zone salary schedule.

- National Board Certification. The state of Florida pays 90 percent of teachers' National Board Certification application fee and a $150 incentive to help defray portfolio preparation costs. Teachers who become National Board Certified receive a one-time payment of $7,500 from M-DCPS. In addition to the payment from M-DCPS, National Board Certified teachers receive an annual bonus of 10 percent for the life of the certificate (10 years) from the state. The state also pays an additional 10 percent bonus to those who provide the equivalent of 90 hours of approved mentoring services to teachers who do not hold National Board Certification. The annual bonuses are equal to 10 percent of the previous year's statewide average pay for classroom teachers.

- Tuition Reimbursement. M-DCPS offers teachers tuition reimbursement for educational courses that will lead to an in-field master's degree. The district reimburses teachers for up to nine

credits per year. The state of Florida offers reimbursement of undergraduate and graduate educational courses that will lead to certification in a critical teacher shortage subject area. Tuition reimbursement from the state is available for up to nine credits per year.

- Loan Forgiveness. The state of Florida assists teachers in the repayment of undergraduate and graduate educational loans that led to certification in a critical teacher shortage subject area. Awards are available for up to $2,500 per year to repay undergraduate loans and up to $5,000 per year to repay graduate loans. Teachers can receive a maximum of $10,000 for the duration of the program.

SUMMARY

High rates of teacher turnover limit schools' ability to create productive learning environments and are disruptive to program continuity and staff cohesion. Research suggests that turnover is highest among beginning teachers and those who enter teaching at a younger age. Studies indicate that turnover rates are higher among teachers who are not certified in the field in which they teach and some studies have found that attrition is highest in fields that offer more attractive earning opportunities outside of teaching, such as math and science. Turnover rates for male and female teachers appear to be comparable. Studies that have examined differences in turnover rates by ethnic group have not produced consistent findings.

Research indicates that turnover is greater in high poverty schools and schools with high percentages of minority and low-performing students. However, studies have found that workplace conditions play a large role in teacher decisions to move to another school or leave the profession. Based on these findings, researchers have recently suggested that teachers do not avoid certain types of students, but may instead be avoiding undesirable school environments. It appears that many teachers may leave high poverty schools with minority, low-performing students because of the poor working conditions often associated with the schools these students attend.

Researchers have documented the influence of salary on teacher attrition, but the relationship is not a simple one. Although salary and other financial incentives are important factors, they may not be enough to attract and retain qualified teachers. Financial compensation appears to have a varying impact on teacher retention, depending on other factors such as teachers' years of experience, qualifications, and satisfaction with workplace conditions.

In sum, the data indicate that teachers leave their jobs for a variety of reasons. Researchers have identified policies that may help reduce teacher turnover, including induction programs for beginning teachers, restructuring of beginning teachers' workloads, and the provision of financial incentives to encourage teachers to remain in the classroom. A number of such programs have been developed and established in M-DCPS.

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