

Teaching Assignments and Their Connection to Teacher Retention, Attrition, and Tracking:

A Literature Review

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Abstract

This literature review considers the influences on teacher career decisions, specifically how a teacher's assignment affects teachers' career decisions and retention. The literature demonstrated connections between challenging teaching assignments and teacher attrition, in addition to links to testing, collective bargaining agreements, and school leadership. Teachers of the neediest students are more likely to leave than those with less challenging assignments. The body of literature fails to include a qualitative study of the process of the distribution of teaching assignments at the secondary level, making it difficult to recommend specific improvements to the process.

Keywords: teaching assignment, teacher retention, teacher attrition, literature review, teacher tracking

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Introduction

Teacher attrition has been a concern for school administrators for many years and researchers have long been interested in this topic. Based on the belief that high quality, effective teachers, researchers have attempted to find reasons that teachers leave or stay in particular schools or in the profession more generally. Many components of the working environment, including salary, administrative support, and self-efficacy have been found to contribute to teachers' decisions to stay or leave. The problem of teacher attrition is even worse in low-income, minority schools. Teaching assignment is one important factor that has been little examined by researchers.

The intent of this paper is to synthesize empirical research on teaching assignment in order to answer the following questions: *What factors do teachers take into consideration when making career decisions? How is teaching assignment connected to teacher retention and attrition? What considerations do administrators take into account when distributing teaching assignments?*

While teachers' working conditions has been of interest to many scholars, limited research exists on the issue of teaching assignments. The purpose of this paper is to summarize recent relevant research, and discuss the implications of that research for how principals might consider crafting teacher assignments. Teaching assignment will be defined as the matching of teachers to specific courses, grade levels, and ability levels within a school building.

I begin this paper by reviewing recent literature on teacher retention and attrition and laying out its connection to teaching assignment. I then examine the literature on teacher

assignment and its links to retention and attrition, testing, teacher quality, and tracking and sorting in order to answer the research questions.

Conceptual Framework

Teaching assignments vary based on grade level and subject area, making them complex and difficult for researchers to define. At the secondary level, public schools provide various courses including honors, Advanced Placement (AP), and International Baccalaureate (IB), as well as general and special education courses. These courses came about as a result of tracking practices in the typical U.S. comprehensive high school. Various professional organizations and educators criticized tracking in the 1990's, resulting in many schools adopting a detracking policy. As the controversy died down, some schools returned to tracking (Loveless, 2013). Despite the decrease in formal tracking across all subjects, according to Bernhardt (2014), "today, this practice [tracking] continues in nearly all middle and high schools (Hallinan & Kubitschek, 1999; Lucas, 1999; Oakes, Gamoran, & Paige, 1992)" (p. 3). These schools provide a wide array of courses for students who may select into various levels of a course. According to Bernhardt (2014), "many middle and high schools have begun to implement open course enrollment policies to increase opportunities for students to experience International Baccalaureate (IB) and Advanced Placement (AP) classes" (p. 2). Tracking has been studied to examine its impact on students in the areas of "student achievement, socioeconomic and racial segregation, differences in classroom practices, and affective outcomes" (Bernhardt, 2013, p. 1), but researchers have not generally taken into account its effect on teachers.

What this comprehensive high school means for a Chemistry teacher is that he or she could be teaching AP or IB Chemistry, regular Chemistry, or teamed Chemistry (co-taught with a special education teacher including students with Individualized Education Programs or IEPs).

An English teacher might teach AP or IB Literature, Honors English, regular English, or teamed English. Selection processes for advanced academic courses vary; some require teacher recommendations while others consider classes open enrollment in an attempt to close the achievement gap (Bernhardt, 2013). These assignments often determine a teachers' workload and may contribute to working conditions and job satisfaction, in turn affecting student learning and teachers' desire to stay at or leave a school (see Figure 1).

Another important piece of the conceptual framework for this literature review is teacher tracking and sorting. Finley (1984) defined teacher tracking as the “phenomenon by which teachers are mapped onto the ability groups” in a school (as cited in Kelly, 2004a). Tracking and sorting disadvantaged students with special needs and often segregated minority and low-achieving students from peers (Adamson & Darling-Hammond, 2012; Clotfelter, Ladd, & Vigdor, 2005; Clotfelter, Ladd, & Vigdor, 2006; Finley, 1984; Kalogrides & Loeb, 2013; Kalogrides, Loeb, & Beteille, 2013; Kelly, 2004b; Lankford, Loeb, & Wyckoff, 2002). Teacher sorting has been found to disadvantage minority and female teachers (Adamson & Darling-Hammond, 2012; Clotfelter et al., 2005; Kalogrides et al., 2013), and minority and low-achieving students tend to be assigned the newest teachers and those of the lowest quality (Kalogrides & Loeb, 2013; Lankford et al., 2002). These studies illustrate the need for a review of the teaching assignment literature with the goal of finding research and policy recommendations that may help provide equity for both teachers and students through the teaching assignment process.

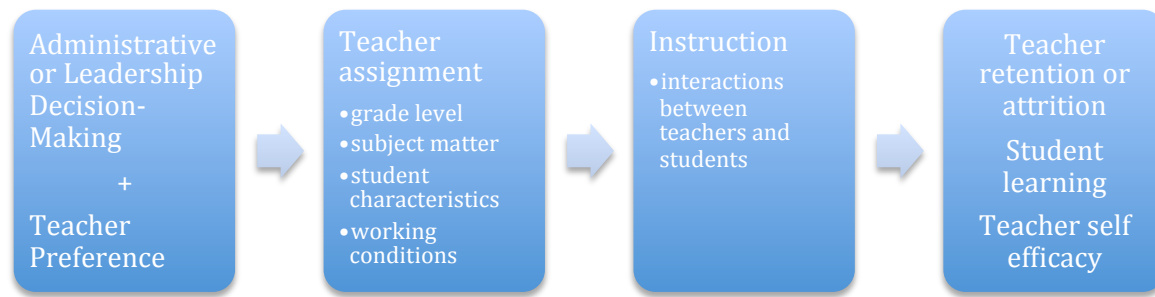


Figure 1. Concept Map: Influences on and Effects of Teaching Assignments

Methods

This literature review includes sources from 2002 through 2014 with a few earlier sources used to define key terms. The search window was set at post-No Child Left Behind in order to avoid out-of-field teaching as a factor in teacher attrition; NCLB attempted to do away with out-of-field teaching with its highly qualified teacher requirement, so more recent studies generally did not include out-of-field teaching as a variable. Key search terms used included teaching assignment, teacher sorting, teacher tracking, retention, attrition, student tracking, student achievement, teacher quality, testing, staffing, scheduling, master schedule, planning, school administrators, influence, perception, efficacy, leadership, leadership theory, collective bargaining agreement, and union. From January 2013 through April 2015, I used multiple databases to review teacher attrition literature, including EBSCO*host*, Education Source, Education Abstracts, Education Research Information Clearinghouse (ERIC), JSTOR, and Google Scholar. Searches on the master schedule process were mostly fruitless, revealing further gaps in the literature.

Teacher Attrition and Retention

What factors do teachers take into consideration when making career decisions? Many

recent studies have examined factors related to teacher attrition and retention, demonstrating that teachers are more likely to leave schools with unsupportive working conditions than schools with positive working conditions. Schools with poor working conditions often house low-income, English language learner, and minority students. This has led researchers to devote their efforts to discovering what policies and strategies might be put in place to retain high quality teachers and what specific factors contributed to teachers leaving schools for other schools or leaving the profession entirely. Researchers found predictors of attrition included being a minority, low number of years of experience, apathy, race incongruence between teachers and administrators, behavioral climate, salary, student characteristics, and school characteristics. In this section, I will examine research on predictors of attrition and retention using subsections of demographic characteristics of teachers, schools, and students; working conditions and salary; and teacher self-efficacy and affect.

Teacher, School, and Student Demographics and Characteristics

Most studies focused on attrition are quantitative and attempt to find predictors of teacher attrition or relate demographics or school characteristics to teacher attrition. In a study with a number of limitations, Kelly (2004a) examined 7,200 public school teachers who left jobs from the 1990-1991 SASS and 1992 TFS using the Stratified Cox Proportional Hazard models and found that poor behavioral environment led to greater teacher attrition while higher salaries only marginally reduced teacher attrition. The researcher found no evidence of higher attrition rates for teachers of low-track students. In contrast with Kelly's (2004a) findings, Hanushek, Kain, and Rivkin (2004) found that teacher mobility was more strongly related to student characteristics than to salary; however, salary still had an effect, especially in teacher retention in disadvantaged schools. Texas public school teachers often left when teaching low-achieving

students (Hanushek et al., 2004). A high rate of minority enrollment pointed to the increased probability that White teachers would leave a school: nearly 20% of teachers in the lowest achieving schools left each year. Hancock and Scherff (2010) studied 4,520 secondary English teachers through responses to the 2003-2004 Schools And Staffing Survey (SASS) and logistic regression analysis to find the most significant predictors of attrition based on teacher responses to the survey questions, selecting 32 independent variables associated with predicting teacher attrition. The three predictors of attrition Hancock and Scherff (2010) found to be most statistically significant for secondary English teachers were being a minority teacher, low number of years of teaching experience, and teacher apathy. Minority teachers were less likely to be at risk for attrition; teachers experiencing apathy were more likely to be at risk for attrition.

Grissom and Keiser (2011) selected school characteristics (percentage of free and reduced lunch price students, percentages of minority students) and teacher characteristics (gender, years of teaching experience, education and certification, teacher race) as control variables in their study of the connection between teacher and principal race congruency and retention. They used the 2003-2004 SASS and 2004-2005 Teacher Follow-Up Survey (TFS) to study 37,000 teachers in 7,200 non-charter public schools to find connections between teacher and principal race congruency and retention. They analyzed these data using ordinary least squares regression, a propensity score-based nearest-neighbor matching estimator, and OLS with school-level fixed effect controls for unobserved principal characteristics. Teachers in Grissom and Keiser's (2011) study conveyed more job satisfaction and turned over less when supervised by a principal of the same race. "Teachers in schools with principals of the same race [we]re significantly more satisfied than observationally similar teachers in the same district who d[id] not match race characteristics with their supervisors" (p. 567).

Grissom and Reininger (2012) went a step beyond attrition to examine re-entry, which was affected by demographics and living situations including gender, marriage, and small children in the family. Through survival analysis of time to re-entry for 268 teachers who left teaching, they found teachers who were younger, better paid, and more experienced were more likely to re-enter teaching. Researchers also discovered that marriage was positively associated with reentry for women but negatively associated with reentry for men. Grissom and Reininger's (2012) consideration of many variables including gender, marriage, fertility, and having children strengthened the study and pointed to some obvious (and previously ignored or overlooked) reasons that women in particular left the teaching field only to re-enter once their children reached school age (Grissom & Reininger, 2012).

Feng's (2009) findings were consistent with those of Hanushek et al. (2004). He analyzed the impact of opportunity wages and classroom characteristics on teacher mobility decisions in Florida, determining that classroom characteristics played a more significant role than student characteristics in teacher mobility decisions. Although higher salaries reduced attrition out of the profession, they had little impact on mobility decisions within teaching. Opportunity wages pulled teachers away from their first teaching positions. Data were taken from the Florida Education Data Warehouse (FL-EDW), a longitudinal database covering 1997-2004 with information on teachers and students that allowed teachers to be linked to classrooms, resulting a database that was useful for analyzing mobility decisions. He used the math score from the Florida Comprehensive Assessment Test Sunshine State Standards (FCAT-SSS), a criterion-referenced test, to measure student ability and took into consideration teacher salaries, classroom characteristics, school characteristics, district/county characteristics, relative salaries and working conditions, wages in non-teaching occupations, inter-district relative wages, inter-

district relative working conditions, and within-district relative working conditions. Teachers with the best draw (highest-performing students) stayed longer in high-performing schools than in low-performing ones. In addition, a higher percentage of Black students increased all risks of leaving a school.

In a study with a similar purpose to that by Hancock and Scherff (2010), Scafidi, Sjoquist, and Stinebrickner (2007) found new teachers were more likely to leave schools with higher proportions of minority students, lower income, or lower test scores: “a one standard deviation increase in the proportion of Black students in a school increases the probability that a ‘median type’ teacher will exit a particular school in a particular year by more than 20%, whereas one standard deviation changes in student test scores, poverty, or teacher pay lead to only small changes in the overall exit probability” (p. 147). Their results demonstrated that while teachers were more likely to leave high poverty schools, this was because these schools had high percentages of minority students. Their sample consisted of 1,070 Georgia elementary school teachers who started teaching between 1994 and 1999 and were less than 27 years old when they started teaching. Researchers acknowledged that estimating the causal impact of school characteristics was difficult due to unobserved school and teacher characteristics. Unlike Hancock and Scherff (2010), these researchers did analyze school characteristics, but not teachers’ stated or perceived reasons for leaving teaching due to their use of different datasets.

Working Conditions and Salary

Many researchers examined working conditions and salaries’ effects on job satisfaction, teacher retention, and attrition. They studied many facets of the work environment, but each had a slightly different focus. Horng (2009) used adaptive conjoint analysis methodology, ANOVAs and MANOVA to examine teacher preferences for 531 elementary teachers in a California

school district. This method was different from the two typical methods of predicting teacher preferences for working conditions (surveys and data on teachers' quitting and transfer behaviors). Her survey was adaptive, meaning it reacted to participants' responses, maximizing responses and minimizing the time taken by the survey. She examined workplace characteristics including facilities, administrative support, class size, commute time, salary, student resources, input on decisions, student SES, student performance, and student ethnicity. She found that clean and safe facilities, administrative support, and small class sizes were very important to teachers based on average characteristic utility values. Clean and safe facilities were statistically significantly more important than the other characteristics studied, and all the working condition characteristics and salary were more important than the student characteristics.

Clotfelter, Glennie, Ladd, and Vigdor (2008) looked at teacher salary, while Cha and Cohen-Vogel (2011) examined working conditions (non-pecuniary factors describing workplace and teachers' job responsibilities, including administrative support, teacher influence over school policies, student conduct, and parental support) and salary. Clotfelter et al. (2008) conducted a longitudinal study of a three-year program in North Carolina where certified special education, math, and science teachers working in public secondary schools with low test scores or high poverty rates received \$1,800 bonuses to find out if salary influenced teacher retention. The sample included over 29,000 teachers. Researchers used discrete-time hazard models to find the impact of the extra pay and employed robustness checks. Findings suggested that the bonus reduced teacher turnover by 17% with the largest effect on veteran teachers; however, the state did not fully educate eligible teachers about the program so the effect of the program may not have been as far-reaching as it could have been. As a result, researchers believed their effects were likely underestimated. Cha and Cohen-Vogel (2011)'s more inclusionary study used

structural equation modeling and the Schools and Staffing Survey (SASS) and Teacher Follow-Up Survey (TFS) to examine the influence of salary, working conditions, and professional development on teachers' job satisfaction and decisions to leave the profession. This study specifically focused on teachers who left for another profession, a unique focus in the body of literature. Researchers found that teachers were likelier to stay if they had higher salaries, more useful professional development, and higher job satisfaction; working conditions was a stronger predictor than salary for teachers' job satisfaction and retention or switching. Job satisfaction mediated the influence of working conditions and the connection between salary and leaving for another profession. Cha and Cohen-Vogel (2011) found no significant differences for the various demographic characteristics analyzed.

Loeb, Darling-Hammond, and Luczak (2005) surveyed over 1,000 teachers in California and analyzed demographic, salary, and turnover data to study how working conditions affected teacher turnover. They analyzed salaries, student characteristics, and working conditions, including facilities, availability of instructional materials, class size and schedule, professional development opportunities, and teacher turnover and hiring. Researchers used three measures as outcomes: teachers' opinions on whether their schools had a turnover problem, teachers' opinions on whether vacancies were difficult to fill at their schools, and the proportion of new teachers. Using factor analysis and logistic regression, they found that high levels of teacher turnover were strongly impacted by low salaries, poor working conditions, and student characteristics. When salaries and working conditions were considered and ameliorated, the impact of student characteristics on teacher turnover decreased. Positive working conditions influenced job satisfaction, which in turn influenced teacher retention and attrition.

One component of working conditions specifically addressed in the research was administrative support of teachers. Boyd, Grossman, Ing, Lankford, Loeb, and Wyckoff (2011) studied school administrators' influence on teacher retention decisions by examining six components of working conditions: teacher influence, administration, staff relations, student behavior, facilities, and safety. They used data on all public schools in New York City—encompassing over 4,300 teachers—administering a survey to first-year teachers in 2005 and a follow-up survey a year later and then matching that information to administrative data. Their survey was based on the Schools and Staffing Survey and the research literature; they utilized multinomial logistic regression, comparing the results of a set of first-year teachers to the other teachers in the same school, and triangulated their results with surveys of teachers who recently left teaching in NYC. Despite the researchers' care taken to ensure reduction of errors and validity of results, the study's use of first-year teachers who were likely to experience working conditions differently than veteran teachers limited the usefulness of the study. First-year teachers were more likely to leave schools that had a higher proportion of Black and Hispanic students; in addition, all factors included in the study except safety predicted teacher retention, with perception of the school administration being the strongest predictor of teacher retention. Gardner (2010) employed comparative statistics, factor analysis, logistic regression, and structural equation modeling to analyze responses by nearly 2,000 music teachers to find that teachers' perception of administrative support had the largest impact on their job satisfaction and their retention in a position. Consistent with the findings of Boyd et al. (2011) and Gardner (2010), Tickle, Chang, and Kim (2011) found that “administrative support was the most significant predictor of teachers' job satisfaction, while job satisfaction was the most significant predictor of teachers' intent to stay in teaching” (p. 342). These researchers studied the effect of

administrative support on teachers' intent to remain in the teaching profession and their job satisfaction through a path analysis of almost 35,000 regular, full-time public school teachers in the 2003-2004 Schools and Staffing Survey. Additionally, administrative support was a mediating factor on the effect of student behavior, teaching experience, and teachers' salary satisfaction on their job satisfaction and intent to continue teaching.

Jackson (2012) examined the link between principal and teacher influence over teacher turnover and school policy. He utilized the 1999-2000 SASS and TFS, including over 35,000 teachers, and conducted multinomial logistic regressions. Jackson found that an increase in teacher influence over school policy was associated with higher job stability. An increase in principal influence was associated with a higher frequency of teacher attrition. This study connected teacher influence over policy with higher teacher retention rates.

Drawing connections to disadvantaged schools, Grissom (2011) found through regression analysis of 30,690 teachers in 6,290 non-charter public schools using the 2003-2004 SASS and the 2004-2005 TFS that teachers' work environments were less positive in schools with many disadvantaged students, and the positive impacts of principal effectiveness were even greater in schools with many disadvantaged students. Principal effectiveness was associated with a lower probability that teachers would leave within one year and higher teacher satisfaction. Turnover rates were highest for first-year teachers; women were less likely to turn over than men, and Hispanic teachers were less likely to turn over than White teachers. Principals had a more positive effect in challenging environments than in the average school; similar results were observed for teacher turnover.

Brown and Wynn (2007) studied the link between teacher retention and leadership and found that principals with an awareness of issues that affect new teachers, a proactive approach

in supporting new teachers, and a commitment to professional growth and excellence for everyone in their buildings had lower teacher transfer and attrition rates than principals without these characteristics. They conducted semi-structured interviews with 12 principals and 61 teachers in a district with a high rate of teacher attrition, analyzing their data through template analysis, using a priori and emergent codes and a consistent comparative analysis method. This study showed a definite connection between administrative support and teacher retention.

In a recent key study, Johnson, Kraft, and Papay (2012) examined whether work conditions affected teacher satisfaction and career decisions, whether schools with more supportive work conditions raised student performance more successfully than schools with less supportive work conditions, and which elements of work conditions mattered most. They used a statewide survey of school working conditions (the MassTeLLS) with demographic and student achievement data from Massachusetts and constructed a set of nine elements that reflected teacher working conditions, yielding a sample of 25,135 teachers. Researchers “fit standard regression models that describe the relationship between each outcome and both overall conditions of work and each element separately, modeling this relationship according to the properties of our outcome variables” (p. 1). They found that social conditions, including principal leadership, school culture, and relationships with colleagues, were the work conditions that best predicted teachers’ job satisfaction and career decisions. Favorable work conditions predicted higher student academic growth. In schools with more supportive work conditions, teachers were more satisfied and less likely to leave.

In sum, the literature on salary and working conditions supported the general body of literature on teacher retention. Both influenced job satisfaction, which in turn influenced teachers’ mobility decisions. These studies came to similar conclusions about the effects of

salary and working conditions on teacher retention: teacher turnover decreased when administrators noted and improved working conditions and salaries (Cha & Cohen-Vogel, 2011; Clotfelter et al., 2008; Horng, 2009; Loeb et al., 2005). Overall, researchers have found that principals who supported their teachers through professional development and a commitment to excellence retained more teachers than those who did not (Brown & Wynn, 2007), and in disadvantaged schools, teachers who reported that their principals were effective were more satisfied with their jobs and less likely to leave (Grissom, 2011). Boyd et al. (2011) and Gardner (2010) found that teachers' perceptions of administrators had the greatest effect on teacher retention of all the factors they studied. Johnson et al. (2012) found that the social conditions in schools were most predictive of teacher career plans and job satisfaction. As evidenced by these mainly large-scale quantitative studies, working conditions and administrative support have a strong effect on teacher retention.

Teacher Efficacy and Affect

Complementary research has investigated teachers' self-efficacy and predictors of professional commitment and burnout. For example, Ware and Kitsantas (2007) attempted to establish whether teacher and collective efficacy beliefs predicted commitment to teaching through data taken from the 1999-2000 Schools and Staffing Survey and researcher-developed efficacy and professional commitment scales, using a random sample of 3,000 from the 26,000 teachers who responded to the survey. They used exploratory factor analysis to derive the three efficacy scales, and they found that their scales did predict professional commitment of teachers.

Donaldson and Johnson (2010) explained that prior research suggested that course assignments affect teacher efficacy, which in turn influences retention and attrition. They selected Teach For America teachers who had been teaching consecutively for four to six years.

The researchers noted the limitations common in teacher retention literature: most other studies used only one or two years of data and did not examine the staying power of teachers in low-income schools over time, ignored teachers who did not leave, or utilized datasets which did not distinguish between voluntary and involuntary teacher transfer. This study was the first to longitudinally examine the retention of Teach for America teachers on a national scale, making it an important study to include in this review of the literature. While Donaldson and Johnson (2010) drew from the Schools and Staffing Survey, they further employed a number of other researchers' surveys and extensive research in creating their own survey and tested survey questions and their online survey process before use. They utilized discrete time-survival analysis with their survey of over 2,000 Teach for America teachers in three cohorts. Donaldson and Johnson (2010) found that Teach For America teachers with more challenging assignments were at higher risk of leaving their position than teachers with less challenging assignments. Secondary teachers with multiple subject or out-of-field assignments tended to resign from teaching altogether, and elementary teachers with multiple grade assignments tended to transfer. Science teachers who earned a degree in a science major were likelier to resign than science teachers who pursued a different major.

Jones and Youngs (2012) examined teacher attitudes and affect and their link to teacher burnout. They used survey data collected in fall 2007 and spring 2008 and the Affective Events Theory as a framework to study 42 beginning general and special education teachers in three districts in Michigan and Indiana. They used the ESM experience sampling method, had two trained coders code the ESM data using previously used codes, and used the Maslach Burnout Inventory. Researchers found a positive association between mean levels of positive affect and skill and commitment. Negative affect and tiredness were predictive of burnout, and working in

special education was associated with burnout. They also found a negative association between special education and teacher commitment to assignment.

In a study similar to that of Jones and Youngs (2012), Pas, Bradshaw, and Hershfeldt (2012) identified predictors of teacher efficacy and burnout. Employing Bandura's definition of self-efficacy, they defined teacher efficacy as related to the ability to create a sufficient learning environment and to deliver instruction. They utilized a longitudinal, multilevel modeling approach, collecting data from 600 teachers at 31 elementary schools three times throughout two school years. Researchers considered teacher demographics, teacher experience, teacher perceptions of school environment, and school-level contextual factors in their analysis, and asked teachers to complete a measure of teacher efficacy and a measure of burnout including items from the widely-used and supported Maslach Burnout Inventory. Pas et al. (2012) found that the growth parameters for both efficacy and burnout were statistically significant, revealing that burnout and teacher efficacy increased over time, with school-level factors unrelated to both. In addition, "teacher preparedness and perceptions of teacher affiliation and leadership were significantly associated with both the intercept and growth of teacher efficacy and burnout" (p. 129).

Ware and Kitsantas (2007) proved that teacher and collective efficacy predicted teachers' professional commitment, Donaldson and Johnson (2010) and Pas et al. (2012) showed that teaching assignments and preparedness affected teachers' efficacy, and Jones and Youngs (2012) determined that negative affect predicted teacher burnout. These studies revealed the connection between teaching assignments, teacher affect, teacher efficacy, and teacher retention. These studies revealed the connection between teaching assignments, teacher affect, teacher efficacy, and teacher retention.

Summary

Factors related to teacher attrition and retention included demographic characteristics of teachers, schools, and students; working conditions and salary; and teacher self-efficacy and affect. So many factors influence working conditions or job satisfaction that it is difficult to grasp exactly why teachers leave; often, there may be more than one explanation for teacher attrition. In looking at the question about the factors that teachers take into account when making career decisions, it is clear from the empirical research in this body of literature that working conditions, job satisfaction, and building leadership behavior strongly influence teachers' career decisions. This review of factors impacting teacher retention and attrition leads to a need to examine the literature specific to teaching assignments as a component of working conditions and a possible influence on teachers' career decisions.

Teaching Assignments

Studies on teacher retention and attrition provided a lens through which to research teacher assignment distribution in order to answer the following questions: *How is teaching assignment connected to teacher retention and attrition? What considerations do administrators take into account when distributing teaching assignments?* In this section, I will first examine empirical research on teaching assignment to uncover how this topic is related to teacher retention and attrition. Then, I will examine teaching assignment literature in subsections, including testing, teacher quality, and collective bargaining agreements and district policies to explain considerations administrators take into account during the teaching assignment process.

Attrition and Retention

Several studies on teacher retention and attrition focused on teaching assignments and their specific role in teacher mobility decisions. All studies were quantitative and most used the

SASS dataset. Researchers found that administrators assigned less experienced teachers to more minority, poor, limited English proficiency (LEP), special education, and lower-achieving students (Feng, 2010) and gave them more challenging assignments overall (Andrews & Quinn, 2004). Teaching assignments among special education teachers changed more frequently in urban schools and those with more minority students (Brummet & Gershenson, 2012). Low-income schools were less likely to retain their teachers (Feng, 2010). More effective schools assigned new teachers in a more equitable manner than less effective schools; they also retained more high-quality teachers than less effective schools (Loeb, Kalogrides, & Beteille, 2012). Teach For America (TFA) teachers with more challenging assignments were likelier to leave schools (Donaldson & Johnson, 2010), and music teachers left their schools for better teaching assignments (Gardner, 2010).

Feng (2010) stated that most previous research on teacher attrition had focused on district and school-level variations but had not examined within-school variations in teaching assignment, pointing to a need for such a study. Therefore, Feng used the 1999-2000 SASS and TFS in conjunction with a statewide administrative data set on public school teachers in Florida, including student test scores and teacher and student demographic information. He used the SASS-TFS to correct for possible misclassification of teachers in the statewide data set and removed part-time and charter school teachers from his sample. He conducted a multinomial logistic regression and found that teachers with less than two years of experience in Florida taught in less effective schools with higher total disciplinary incidents per student compared with veteran teachers. Within schools, Feng's (2010) study showed that teachers with fewer than two years of teaching experience had more struggling, low-income, special education, minority, and LEP students than veteran teachers in the same school. After controlling for school environment,

Feng found that classroom settings correlated with teacher mobility in both data sets, and poor schools had difficulty retaining teachers. This study was important to the body of literature because it was the first study to link teachers to their specific students, and it evaluated the impact of classroom environment and teaching assignment on teacher mobility, revealing some of the problems with statewide data sets being utilized by educational researchers.

Two years later, Brummet and Gershenson (2012) examined reassignments of 34,000 K-5 self-contained special education teachers using Michigan's Registry of Educational Personnel 2003-2009, National Center for Education Statistics' Common Core of Data, and MDE school report cards in a more narrowly focused study with a large sample. They conducted multivariate regressions and discovered that almost 17% of these teachers switched the grade they were teaching at least once in the six-year period studied. They found veteran teachers were less likely to switch grades than inexperienced teachers. Higher grade-level reassignment rates were found in urban schools and schools with large numbers of minority students. In addition, grade switching predicted grade switching in the future.

In contrast with the studies by Feng (2010) and Brummet and Gershenson (2012), Andrews and Quinn (2004) explored first year teaching assignments by examining all first year middle and high school teachers (n=51) in a district—a small sample size and a different type of teachers from other studies. They utilized a 10-question survey and simple tallying of responses to find that new teachers continue to struggle with assignments that require floating (teaching in multiple classrooms throughout the day), out-of-field teaching, and too many preparations. They collected no other data, making this a very simple study though a functional way to compare teaching assignments within-district.

In another quantitative study with a large sample of over 10,000 teachers and 350 schools, Loeb et al. (2012) studied Florida student test scores on the Florida Comprehensive Assessment Test (FCAT) in reading and math and seven years of administrative data from Miami-Dade County Public Schools. The researchers used value-added methods in this quantitative study to analyze relationships between the effectiveness of schools and their hiring, assignment, development, and retention of teachers. Due to numerous potentially confounding variables, the researchers could not clarify based on their data whether more effective schools better identify more effective teachers and thus hire more of them or whether more effective teachers simply apply to more effective schools. Nevertheless, Loeb et al. (2012) found that more effective schools hired teachers who were more effective and assigned new teachers in a more equitable manner than less effective schools did. In addition, teachers at more effective schools improved their instructional practice more quickly than teachers at less effective schools, and more effective schools retained more high-quality teachers than less effective schools.

Two previously discussed studies explicitly connected teaching assignments to attrition and retention: those of Donaldson and Johnson (2010) and Gardner (2010). Donaldson and Johnson conducted the first longitudinal study examining retention of Teach for America teachers through a discrete time-survival analysis with their survey of over 2,000 Teach for America teachers in three cohorts. Donaldson and Johnson found that Teach For America teachers with more challenging assignments were at higher risk of leaving than teachers with less challenging assignments. Gardner (2010) similarly investigated factors related to K-12 music teacher attrition through comparative statistics, factor analysis, logistic regression, and structural equation modeling of SASS responses from about 2,000 music teachers. Gardner found that music teachers changed positions for better teaching assignments, leaving behind unsatisfactory

working conditions; they left teaching altogether for better benefits or a higher salary. Their perception of administrative support had the largest impact on their job satisfaction and their retention in a position. With no follow-up studies tracking the teachers who left for better assignments, it is unclear whether the teachers in Gardner's (2010) study were ever satisfied with any assignment.

Clearly, urban and low-income schools, as well as schools with a high number of minority students enrolled have the most difficulty retaining effective teachers. These studies confirm the link between teaching assignments and teacher attrition and retention. The research also demonstrated that low-income and urban schools suffered from more teacher turnover and attrition than other types of schools.

Testing

As accountability gained ascendance with No Child Left Behind (NCLB), other research examined relationships between testing and teaching assignments. Cohen-Vogel's (2011) qualitative study connecting teaching assignments to testing analyzed the teaching assignment distribution process in part but remained narrowly focused on testing while taking into account hiring, reassignment, and professional development. While students were not being assigned to improve school scores, they were being sorted to ensure balance in classes (Osborne-Lampkin & Cohen-Vogel, 2014). Both studies highlighted the influence of testing in the sorting and assigning of teachers and students in schools.

Cohen-Vogel (2011) examined whether principals staffed to the test in an education system focused on No Child Left Behind. She conducted a cross-case, cross-sectional study of 10 elementary schools—two each in five Florida districts. She held semi-structured interviews focused on the hiring, reassignment, and dismissal processes; using an iterative approach,

Cohen-Vogel (2011) found that school leaders were hiring, moving, and developing teachers to attempt to increase schools' performance on state tests—what she defined as “staffing to the test” (p.483). Several years later, Osborne-Lampkin and Cohen-Vogel (2014) investigated testing and sorting from the student angle. They held semi-structured interviews with principals, assistant principals, teachers, and parents in 10 case study schools in Florida and carried out content analysis of various documents. Their findings suggested that student test scores were used to guarantee balance in classes rather than being used to assign students to classes to improve school performance on tests. Administrators also took teacher personalities into account. The researchers were surprised to find no mention of bubble kids or of pairing teachers with students who had previously been successful with that teacher. Both qualitative studies examined teacher staffing to the test and student assignment to the test but found that only teachers were being placed by administrators to improve school performance (Cohen-Vogel, 2011; Osborne-Lampkin & Cohen-Vogel, 2014).

Collective Bargaining Agreements and District Policies

Collective bargaining agreements (CBAs) may contain provisions that restrict administrators' discretion in distributing teaching assignments by privileging seniority. A number of researchers have conducted content analysis of CBAs to examine these provisions.

Koski and Horng (2007) held semi-structured interviews of 19 human resource administrators and analyzed 488 collective bargaining agreements (CBAs) using OLS regression and HLM. They found that strong seniority preference rules in CBAs were linked with a higher percentage of certified teachers, while schools with higher percentages of minority students had lower percentages of certified and veteran teachers. They did not find that seniority policies independently affected the sorting of teachers, nor did seniority policies worsen the negative

relationships between higher minority schools and uncertified and novice teachers. The study's only major limitation was the fact that seniority preference may occur in schools due to school or district culture, regardless of seniority rules' existence (or non-existence) in CBAs.

Utilizing a smaller sample than Koski and Horng (2007), Cohen-Vogel and Osborne-Lampkin (2007) directed a content analysis of 66 collective bargaining agreements in Florida from 2002-2003 and used FCAT scores and VDOE data from Florida on enrollment and demographics. They utilized the Contract Provision Analysis Form adapted from Goldschmidt and Stuart, classifying contract provisions, analyzing for frequencies, classifying by content area, and coding. They found that while staffing rules frequently privileged seniority, collective bargaining agreements still granted administrators more discretion over transfers, reductions, and reassignments than had been previously suggested. Contracts were not more likely to restrict administrators' actions in large, poor, minority districts than elsewhere. They discovered requirements governing teacher assignments could be split into five categories: new hires, voluntary transfers, involuntary transfers, workforce reductions, and reassignments. Researchers employed member checking to ensure validity, but only analyzed documents and scores. The study omitted several important variables, including politics, the relationship between school or district leadership and the union, and district history of strikes and negotiations with the union. This study was a reminder that while provisions in CBAs may seem to restrict administrators, the reality may not match the provisions.

Strunk and Grissom (2010) investigated the ability of strong unions to shape district policies in a mixed methods study. They ran a content analysis of 113 CBAs and conducted a statewide survey of school board members in California using a Partial Independence Item Response model. The researchers found that CBAs in districts with stronger unions gave less

flexibility to administrators than CBAs in districts with weaker, less active unions. The higher the percentage of educators sitting on a school board, the more restrictive the contract, and the higher the percentage of Republicans sitting on a school board, the less constrictive the contract. School board members may have misrepresented union strength, which could have compromised the validity of the study; researchers found it difficult to draw strong causal conclusions and were concerned that the relationship was endogenous.

Provisions in collective bargaining agreements limited administrator discretion, though not as much as critics had previously believed. While seniority preferences often existed in CBAs, they did not in actuality greatly restrict administrators' flexibility in making teaching assignments (Cohen-Vogel & Osborne-Lampkin, 2007; Koski & Horng, 2007; Strunk & Grissom, 2010).

The Process of Teaching Assignment Distribution

Carlyon and Fisher (2012) found that leaders practiced authentic leadership in distributing teaching assignments and were the only researchers to address the question, *What considerations do administrators take into account when distributing teaching assignments?* In a small qualitative study, Carlyon and Fisher (2012) explored factors that inform elementary principals' decision-making in teaching assignments. They interviewed eight elementary school principals in New Zealand and examined the data for patterns and themes and found that principals practiced authentic leadership, considering teacher needs, teacher knowledge of students' learning, and teachers' knowledge of pedagogy. The themes they discovered from their data were principals' strategic thinking, the process, team dynamics, tacit knowledge, and developing teachers and growing leaders.

Summary

The literature on teaching assignment distribution revealed clear connections to teacher retention and attrition (Andrews & Quinn, 2004; Brummet & Gershenson, 2012; Donaldson & Johnson, 2010; Feng, 2010; Gardner, 2010; Loeb et al., 2012), testing (Cohen-Vogel, 2011; Osborne-Lampkin & Cohen-Vogel, 2014), and collective bargaining agreements and district policies (Cohen-Vogel & Osborne-Lampkin, 2007; Koski & Horng, 2007; Strunk & Grissom, 2010). The body of literature on teaching assignment answered the questions, *How is teaching assignment connected to teacher retention and attrition?* and *What considerations do administrators take into account when distributing teaching assignments?* while demonstrating a clear need for further research on the teaching assignment process. The strategies and rationale employed by administrators throughout the teaching assignment process remain, for the most part, unclear.

Discussion

The literature on teacher retention and attrition answered the question *What factors do teachers take into consideration when making career decisions?* in several ways. Researchers found that working conditions and salary are more important to teachers than student characteristics; while bonuses may improve retention, salary only marginally reduces attrition. Working conditions are a stronger predictor of job satisfaction than salary, and job satisfaction may mediate the influence of working conditions.

Factors that lead to teacher attrition include poor behavioral environment and student characteristics. Teachers of schools with low performance, low-income students, and a high minority population are likelier to leave. Teachers with high-performing students in a high-performing school are less likely to leave than teachers with the same students in a low-performing school. Minority and novice teachers are likelier to leave the profession than White

teachers and experienced teachers. Teachers who are younger, better paid, and more experienced are likelier to re-enter the field after an absence.

Building leadership seems to have a strong effect on teacher retention. A number of studies found that the perception of the school administration was the strongest predictor of teacher retention and of job satisfaction. In addition, administrative support was a mediating factor on the effects of student behavior and teaching experience on job satisfaction and professional commitment. Principal effectiveness increased teacher job satisfaction, and the positive impacts of principal effectiveness were greater in schools with many disadvantaged students.

Clearly, increased job satisfaction is important, as are supportive working conditions, to increase teacher retention. These factors mediate the potentially negative effects of student characteristics on teacher turnover—effects that are especially evident in schools with high minority enrollment and high numbers of students living in poverty. Working conditions encompass many factors, some which may be influenced by building leadership and others which are out of their hands; however, the research points to principal leadership and social conditions as components of working conditions that educators can influence and change to retain strong teachers.

Several researchers' work answered the question *How is teaching assignment connected to teacher retention and attrition?* Overall, administrators gave novice teachers more challenging assignments than their more experienced colleagues, often assigning them to minority, poor, limited English proficiency, special education, and lower-achieving students. Special education teachers' assignments changed more frequently in urban schools and those with more minority students. Teachers with more challenging assignments were likelier to leave

the profession entirely or head to another school offering a better teaching assignment.

The literature did not provide a complete answer to the question *What considerations do administrators take into account when distributing teaching assignments?* In some cases, teachers are placed into specific teaching assignments to improve school performance on standardized tests. While some provisions in collective bargaining agreements or district policies privilege seniority, administrators still have discretion over hiring and giving out course assignments.

Limitations

Over 80% of the empirical studies on teacher retention and attrition examined in this literature review were quantitative and nearly one-third of those studies used the Schools and Staffing Survey and Teacher Follow-up Survey datasets. Few of these quantitative studies were conducted longitudinally, limiting their validity and generalizability. Many of these studies addressed broad topics such as working conditions or job satisfaction but failed to look at small school-level factors that influenced teacher turnover that might be simple to put into policy in order to increase retention rates.

The most commonly used datasets in the teacher attrition, retention, and mobility literature were the Schools and Staffing Survey (SASS) and the Teacher Follow-up Survey (TFS), considered “the largest, most extensive survey of K-12 school districts, schools, teachers, and administrators in the USA” (Cha & Cohen-Vogel, 2011, p. 375). Many teacher retention researchers use these surveys due to their comprehensive nature and large random sample. Given the survey’s design, there are limitations in relation to this body of literature, including the fact that one cannot differentiate between voluntary and involuntary turnover using SASS.

Much of the research on teacher retention and attrition raises interesting points about job

satisfaction and working conditions in education. It is necessary to take these findings and pursue research on how to improve job satisfaction to retain quality teachers, especially in schools with high populations of disadvantaged students. School administrators have a strong influence on teacher retention based on this body of literature; their behavior in relation to teaching assignment distribution is one way they may be able to make teachers feel supported and also reduce the potentially negative effects of teacher tracking in education.

Future Research

This review of recent research on teacher attrition and retention, teacher tracking, and teaching assignments revealed several gaps in the literature. In order to better understand factors that increase job satisfaction for teachers, qualitative research that includes teachers' voices is needed. More detailed perspectives on problems that are not conceptualized in the structures and questions that frame the SASS and other large datasets will help flesh out the body of research on these topics. Studies focused specifically on the process of teaching assignment will provide insights into how and why administrators make these choices that may affect their relationships with teachers, which in turn may affect teachers' job satisfaction. More research overall and more methodologically comprehensive research on teaching assignment will shed new light on this process and its links to teacher attrition, retention, and tracking.

Teaching assignment has not been an area in which researchers have dug deeply. More studies are needed in this area to provide policy recommendations to schools and districts to help them increase retention of high quality, effective teachers. None of these studies examined teaching assignments specifically as a reason for leaving or re-entering the profession. In order to more fully understand why teachers stay or leave a given school or district, qualitative studies that give teachers and administrators a voice are needed. Teaching assignment is a key

component in teachers' perception of working conditions and job satisfaction and is worthy of more research. Donaldson and Johnson (2010) pointed to the clear need for an examination of teacher assignments, specifically qualitative research into how administrators assign teachers to classes and courses and if those assignments affect new and veteran teachers' decisions to remain in the profession or leave. A qualitative study examining teaching assignment would illuminate how administrators distribute teaching assignments and the effects on teachers, enabling an improvement of the process to improve teacher retention rates. Interviews would give voice to the experiences of teachers and administrators on this topic, bring the teaching assignment process to light, and help provide recommendations to correct the problems brought out in the literature.

Implications and Conclusion

These studies demonstrated a clear link between challenging teaching assignments and teacher attrition. Unfortunately, challenging teaching assignments tend to be those including minority, special needs, LEP, and free and reduced price lunch students. Administrators who do not fully understand teacher tracking and its consequences may inadvertently exacerbate the problem, resulting in inequity for both students and teachers. Teachers seem to be more willing to stay in a school that has supportive leadership, positive working conditions, and good salaries than in a school that is missing some of those components; teaching assignment is another factor that impacts working conditions and job satisfaction and influences teacher career decisions. More research needs to be done on the process of distributing teaching assignments and teachers' perceptions of the process to better understand how the process can be done well in order to retain effective teachers. Supportive and effective school leadership is one key to improving the distribution of teaching assignments to retain high quality teachers; however, specific strategies

and lived experiences of educators will help flesh out what is needed in order to provide guidance to school districts on this topic. Finding the balance between equitable distribution of teaching assignments for students and assignments that provide job satisfaction to teachers may prove to be the most difficult part of the process.

There was a paucity of qualitative research on teacher retention and its contributing factors. The firm connection established between teaching assignments and teacher retention via several quantitative studies with large sample sizes and careful steps to ensure validity, and the specific call for a qualitative study on the teaching assignment distribution process (Donaldson & Johnson, 2010) demonstrated the need for such a study to fill the gap in the literature. While several studies have connected teaching assignments to testing and collective bargaining agreements and district policies, only one study examined the process of teaching assignment distribution, specifically in elementary schools (Carlyon & Fisher, 2012). This body of literature demonstrated a need for qualitative research on this topic and an analysis of how administrators distribute teaching assignments, especially at the secondary level where multiple teaching assignments are generally possible for teachers. If this complex process could be more clearly understood, researchers would be able to make policy recommendations for school-based administrators on equitable distribution of teaching assignments that would keep high-quality teachers in schools. The gaps in the literature revealed that a study of the process of administrative distribution of teaching assignments including both administrative and teacher voices is needed to understand this process and its effects.

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