An Analysis of Teacher Attrition in Tennessee Charter Schools

Matthew D. Campbell, Nicholas J. Gesualdi, Rachel W. Moquin

Foreword

This study seeks to offer an analysis of various factors that affect teacher retention efforts at charter schools in Nashville and Memphis, Tennessee. The findings exist within a growing catalog of literature documenting the causes and effects of teacher attrition in charter schools. The study was completed by three doctoral students fulfilling the requirements for their educational doctorate at Vanderbilt University. A full reference list and appendices follow the main body of the document.

About the Authors

Matthew D. Campbell is the Director of Graduate Development for the Memphis Teacher Residency. He worked previously as an instructional coach for the Memphis Teacher Residency and a classroom teacher at The Soulsville Charter School in Memphis, Tennessee. He began his career in education as a Teach For America Corps member, teaching middle school English and History.

Nicholas J. Gesualdi is the Principal of the Saltonstall K-8 School in Salem, MA. Previously, Nick served as the Director of Operations at the highest performing public school in Boston, the Eliot K-8 Innovation School, and as a member of the successful turnaround team at the Orchard Gardens K-8 Pilot School as a history teacher. He started in education as a Teach For America Corps member, teaching AP US History, US History, and AP Government at KIPP Houston High School.

Rachel W. Moquin is an Instructional Coach for the Memphis Teacher Residency. She worked previously as an instructional coach and administrator for KIPP Memphis Collegiate Schools, an English teacher at KIPP Memphis Collegiate High, and an English teacher at Callaway High School in Jackson, Mississippi as a member of the Mississippi Teacher Corps.

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Executive Summary

The Tennessee Charter School Center (TCSC) formed in 2013 through the merger of the Tennessee Charter School Incubator and the Tennessee Charter Schools Association. The TCSC combines the functions and resources of the previous two groups by promoting education and awareness of charter schools, advancing policy and advocacy, supporting innovation and incubation of charter schools, and supporting leaders at charter schools across the state. Perhaps the largest human capital concern for these schools is the yearly movement of teachers out of the classroom. Unquestionably, some turnover is healthy for schools, but retaining higher numbers of effective teachers is a priority for all charter schools across the state. Understanding the causes and patterns of these departures will allow the TCSC to support their schools more effectively and offer the opportunity to tailor future hiring and retention practices to the unique needs of each school. In an effort to understand the current labor portrait, we explored the following project questions:

1. How do teachers at Tennessee Charter Schools rate their satisfaction regarding four common causes of teacher attrition (instructional support, compensation, school conditions, burnout)?

2. How do teacher characteristics (gender, race, age, teaching experience, educational attainment) influence teachers' attrition plans at Tennessee Charter Schools?

3. How do variations in charter school characteristics (network CMO vs. local CMO vs. standalone school, established vs. startup, elementary vs. secondary) influence teachers' attrition plans at Tennessee Charter Schools?

4. Within our framework, what factors predict teacher attrition at Tennessee Charter Schools?

To answer these questions, we combined quantitative and qualitative data from a survey instrument that was completed by 131 charter school teachers in Memphis and Nashville across a variety of building contexts. For the first project question, we operationalized each attrition factor using existing scales and surveyed teacher opinion. For the second project question, we gathered relevant teacher characteristics from the demographic portion of our survey. For the third project question, we gathered relevant school characteristics from the introductory portion of our survey. To answer the fourth project question, we ran multiple regressions with various predictor and outcome variables. For each question we analyzed quantitative data using appropriate statistical methods to gauge significance and coded qualitative responses for themes and illustrative quotes.

Key Findings

Teachers report lukewarm feelings of satisfaction/dissatisfaction concerning four common causes of teacher attrition
Neither overwhelmingly positive nor demonstrably negative, teachers reported moderate levels of satisfaction concerning their instructional support, present level of burnout, school conditions, and compensation.

No single teacher characteristic has significant influence on teacher-reported attrition plans
Of the teacher characteristics we scrutinized (gender, race, age, teaching experience, educational attainment), none had a statistically significant relationship with teachers' future career plans.

No single school structure has significant influence of teacher-reported attrition patterns
Of the structural characteristics we scrutinized (organization/management structure, age of school, grade levels served), none had a statistically significant relationship with teachers' future career plans.

Within our predictive models, teacher perception of burnout, compensation, and middle-age range all had a significant impact on teacher's future plans
While it was expected that burnout would prove significant, the literature on compensation and age-range is more mixed in terms of overall impact. Nevertheless, these factors display both practical and statistical significance for teachers' future plans.

Teachers employed within charter networks are more likely to report burnout than those teaching at single site schools
Our analysis revealed that network charter school teachers

(local and national) experienced burnout at higher levels than their peers. This is cause for concern among network charter schools due to burnout's deleterious effect on teacher attrition.

Recommendations At-a-Glance

Mission Fit in Hiring
Principals should include a "mission-fit" activity in the hiring process. This could happen in a variety of ways, but what should be in place, regardless of individual principal approach, is a clear presentation of the school's mission and vision to candidates during the interview process.

Robust Teacher Support Systems
Schools should include teacher support systems beyond those offered by the administration. An example of this would be an induction and mentoring program for all new teachers that would provide a consistent source of support during the first months of school. Although principals have increasing and divergent demands of their time, schools cannot afford to neglect offering instructional support to their teachers.

Align Workload to Teacher Interest & Limit Extraneous Responsibilities
Due to the prevalence of burnout among charter school teachers, principals should harness teachers' natural interests and passions for increased commitment. Expanding a teacher's responsibilities beyond delivering content could enhance organizational commitment for many teachers. However, principals should limit these additional responsibilities and offer periodic breaks from non-instructional duties.

Study High-Retaining Schools
Within the TCSC network, the center should identify and study high-retaining schools in order to learn from their successes. Notably, these efforts should focus on schools that have a demonstrated ability to dampen teachers' feelings of burnout and those schools that have novel compensation models for second stage teaches.

Organize Networked Improvement Communities
With the above recommendations in place, the TCSC should link school leaders across the state via Networked Improvement Communities. These communities will allow network principals to leverage collective expertise and systematically sharpen their human capital practices around decreasing feelings of burnout and experimentation with new compensation models for second stage teachers.

Pilot Compensation Models
Our regressions indicated that teacher burnout had the highest negative impact on satisfaction, but for teachers at

schools in networks, compensation had a significant, substantial impact. Implementing alternative/innovative compensation models will help to address compensation concerns, especially at networks.

Enhanced Job Design for Second Stage Teachers
Similar to the above recommendation concerning compensation, schools should invest in new leadership models for veteran teachers. Rather than encouraging the best teachers to pursue an administrative role, principals should work to empower their best teachers while they remain in the classroom. If done well, this could also increase the instructional support that new teachers experience.

Introduction: The Problem of Teacher Attrition

A high rate of teacher attrition in American schools is a widespread, perennial problem. Yearly, schools must confront the reality of replacing experienced teachers with well-meaning, but inexperienced replacements. This continual churn of teachers negatively affects many aspects of a school including student academic performance, student attendance rates, organizational trust, and staff culture (Renzulli, Parrott, & Beattie, 2011). Due in part to the ubiquity of teacher attrition, the issue has received much attention and scholarship. The following trends are well documented and help frame an initial understanding of teacher attrition in the United States:

- More teachers leave the classroom than enter it on a yearly basis (Schwartz, Hernandez, & Ngo, 2010).

- The labor market for teachers has become less stable over the last three decades; overall attrition from the field rose from 6.4 percent to 9 percent between 1988 and 2009 (Ingersoll, Merrill, & Stuckey, 2014).

- Different pathways into teaching yield significantly different retention rates for teachers (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009).

- Schools serving high minority populations experience greater difficulty with teacher attrition from year-to-year than majority-white schools (Borman & Dowling, 2008; Smith & Ingersoll, 2004; Hanushek, Kain, & Rivkin, 2001; Lankford, Loeb, & Wyckoff, 2002).

- Teacher attrition occurs more often in response to school demography than to salary issues or compensation schedules (Lankford et al, 2002).

- The current teacher labor portrait is both "greener" and "grayer" than ever before; the largest subgroups within the overall teaching population are beginning teachers and those nearing retirement (Ingersoll et al., 2014).

Charter schools are not immune to teacher attrition. In fact, charters experience higher levels of teacher attrition from year to year than their public school counterparts. Stuit and Smith (2012) found charter school teachers are 130 percent more likely to leave the profession than remain in their schools and 76 percent more likely to move schools after a year of teaching than traditional public school teachers. Charter school teachers also have less experience than their traditional school peers, are more likely to lack advanced degrees or full certification and exercise job choice more freely when selecting a job than traditional public school teachers (Cannata & Penaloza, 2012).

There is a strong, persistent relationship between instructional support and teacher turnover (Grissom, 2011; Borman & Dowling, 2008; Ingersoll, 2001).

Project Questions

These factors combine to paint a troubling picture for the charter school labor market in Tennessee. When studying charter school teachers, it is vital to compare different types of charter schools due to wide differences between schools (Cannata & Penaloza, 2012). Thus, describing this portrait accurately requires nuance and a multidimensional critique; differences in the type of charter school, along with various school-based and out-of-school factors, undoubtedly influence teacher attrition from year to year. With this in mind, our study seeks to offer a descriptive portrait of teacher attrition at charter schools in Memphis and Nashville, Tennessee by answering the following questions:

Project Question 1:
How do teachers at Tennessee Charter Schools rate their satisfaction regarding four common causes of teacher attrition (instructional support, compensation, school conditions, burnout)?

Project Question 2:
How do teacher characteristics (gender, race, age, teaching experience, educational attainment) influence teachers' attrition plans at Tennessee Charter Schools?

Project Question 3:
How do variations in charter school characteristics (national CMO vs. local CMO vs. standalone school, established vs. startup, elementary vs. secondary) influence teachers' attrition plans at Tennessee Charter Schools?

Project Question 4:
Within our framework, what factors predict teacher attrition at Tennessee Charter Schools?

Answering these questions will allow the TCSC to better tailor future professional development opportunities across its network and will provide a nuanced understanding of teacher attrition across charter schools in Tennessee. Key in answering these questions is accounting for the TCSC network's unique context, carrying out a robust methodological design, and connecting findings to the extant literature on teacher attrition at charter schools.

Contextual Analysis

As we are focusing on charter schools in Memphis and Nashville, an understanding of the educational landscape of these cities will provide important context. Each city has its own school district--Shelby County Schools (SCS) in Memphis, and Metropolitan Nashville Public Schools (MNPS). In addition, the bottom 5% of schools are automatically classified into one school district, termed the Achievement School District (ASD). Given that both cities have schools in the bottom 5%, the ASD operates in Memphis and Nashville. Given this policy context, the charter schools that are part of this study have been authorized by SCS, MNPS, or the ASD.

The Soulsville Charter School, Memphis, Tennessee

Shelby County Schools

Shelby County Schools is the 22nd largest school district in the nation and the largest in Tennessee. SCS is home to 207 schools, 73 of which are charter schools. There are currently 6,800 teachers in the system, 5,400 female, and 1,400 male. 97.0% of teachers are Highly Qualified. The racial makeup of the teachers is 61% African American, 37% White, 1% Hispanic, and 1% Asian. There are currently 111,500 students enrolled in SCS; 75.7% are African American, 14.2% are Hispanic, 10% are Asian, and 3.7% are identified as other. Economically disadvantaged students make up 82.4% of the student population. Ten percent of students have disabilities, and 6.5% are English Language Learners. The most recent graduation rate was 75%, the average ACT was 17.6, and only 21.6% of students had an ACT of 21 or higher, an important cutoff for the state's lottery-funded scholarship. Within the charter schools of SCS, 95% of students are African American, 3.9% are Hispanic, 0.7% are White, and 0.2% are Asian. Charter schools have existed in Memphis since 2003, and as noted above, charters overwhelmingly serve students of color. At the same time, the demography of most charter school faculties skews heavily White; this racial mismatch typically has a negative impact on year-to-year teacher attrition (Strunk & Robinson 2006; Borman & Dowling 2008; Renzulli et al., 2011).

KIPP Academy Nashville, Nashville, Tennessee

Metropolitan Nashville Public Schools

Metropolitan Nashville Public Schools is the 42nd largest school district in the nation and the 2nd largest in Tennessee. MNPS has 155 schools, 29 of which are charter schools. The latest census of teachers shows 7,109 teachers in MNPS and 98.1% are Highly Qualified. In the 2014-2015 school year there were 78,477 students enrolled in MNPS--43.3% African American, 31.8% White, 20.3% Hispanic, and 4.3% Asian. Economically disadvantaged students make up 74.6% of the student population, with 12.5% of the student population having a disability, and 16.3% having limited English proficiency. In 2015, the graduation rate in MN4PS was 81.2%, the average ACT score was 18.7 and 31.3% of takers scored 21 or higher. Within the charter schools of MNPS, 58.9% of students are African American, 25.8% are Hispanic, 14.0% are White, and 1.2% are Asian. Similar to Shelby County, the first charter school in Nashville was founded in 2003. However, the student demography of MNPS charter schools is more racially balanced than Shelby County charters.

Hanley Aspire Elementary, Memphis, Tennessee

The Achievement School District

The Achievement School District governs schools in the bottom 5% across the state according to calculated metrics. There are currently 31 ASD schools open in Memphis, of which, 24 are charters. There are 3 ASD schools in Nashville, all of which are charters. Of the 502 teachers in the ASD, only 64.9% earn the designation Highly Qualified. In total, the ASD serves 10,348 students; 72.7% of the students are economically disadvantaged, 13.2% have a disability, and 3.0% are English Language Learners. The racial breakdown of the ASD is 93.9% African American, 3.9% Hispanic, 1.7% White, 0.4% Asian. The graduation rate in the ASD is 40.4%, with a mean ACT score of 15.4, and 4.6% of students scoring 21 or better. The Achievement School District has served Tennessee students since the 2012-2013 school year. Recent research (Henry, Zimmer, Kho, & Pham, 2017) has highlighted the attrition struggle across the district, reporting the turnover rate for ASD schools at 63 percent from 2012-2015.

Methods

Survey Creation & Delivery

Employing a mixed-methods approach, we attempted to survey teachers at the 102 charter schools located in Nashville (Metropolitan Nashville Public Schools) and Memphis (Shelby County Schools), and the Achievement School District.

To ensure that our survey had the highest degree of reliability, the tool that we compiled was composed of previously vetted scales and questions that reflected constructs identified in the extant literature as relevant to understanding teacher attrition (instructional support, compensation, school conditions, burnout). The specific items on our survey were adapted from original indices developed by the federal government for use in National Center for Education Statistics surveys, including the 2011-2012 Schools and Staffing Survey and the 2012-2013 Teacher Followup Survey (National Center for Education Statistics, n.d.). Additional items were adapted from original surveys developed for the 2012 North Carolina Teacher Working Conditions Survey (2012), and for a doctoral dissertation research study at Virginia Polytechnic Institute and State University (Giacometti, 2005). All of the original items were created with nationally representative samples and are, therefore, presumed to be highly reliable. Each of the items was selected for the strength of its validity in accurately measuring the individual constructs. Additionally, the face validity for each was discerned by our team (see Appendix A for our full survey). Scale creation was informed by a principal component analysis completed for each scale, whereby all scales yielded a Cronbach's Alpha's over 0.8, indicating a high degree of reliability.

After IRB approval, the survey was emailed during November 2016 to the principals of the 102 charter schools in our sample. We did not have individual rosters of teacher contact information, so we requested that principals distribute the survey to their faculty. To do this, we sent introductory emails which included information about our project, a stock email to teachers, and instructions to principals to send out to staff on our behalf (See Appendix B for initial principal recruitment email).

To incentivize teacher participation in the survey, we offered teachers who were interested a chance to win a $50 Visa gift card. After the initial round of emails, we waited approximately two weeks and then sent principals a follow-up email to encourage participation a second time (see Appendix C for sample follow-up email). Our survey

remained open for six weeks, and we were able to collect 131 respondents from 25 different school sites.

Sample Details

As we do not have individual rosters per school, it is not possible to compare the final sample to the population of charter school teachers in these cities. The average school had a response rate of 21%, although it ranged from 4 to 52%.

The majority of our sample consisted of teachers under 30 years old (68.7%), teachers who are female (72.7%), teachers who are Caucasian (76.8%), and teachers who have master's degrees (60.6%). Interestingly, almost one in three teachers surveyed did not have a degree specifically in education (29.3%). One in ten teachers in our sample are first year teachers, and more than three quarters of our sample has less than 5 years of teaching experience (76.8%). This sample composition is generally reflective of charter school teachers in other research (Cannata & Penaloza, 2012). However, two key differences from what is known about charter school teachers are that our sample is comprised of a higher percentage of teachers with advanced degrees than has been reported of charter school teachers across the country, and our sample has fewer years of experience than national averages for charter school teachers (Cannata, 2008).

Geographically, 78.5% of our sample teaches in Memphis (102 teachers) while only 21.5% (28 teachers) teach in Nashville charter schools. This is representative of the distribution of charter school between the two cities, as 72% (73 schools) are located in Memphis, while 28% (29 schools) are located in Nashville.

Table 1: Response Rates by School

School	City	Total Teachers in Building	Number of Survey Respondents	Response Rate
A	Memphis	24	4	17%
B	Memphis	19	3	16%
C	Memphis	13	1	8%
D	Memphis	31	2	6%
E	Memphis	25	4	16%
F	Memphis	18	6	33%
G	Memphis	22	1	5%
H	Memphis	6	2	33%
I	Memphis	21	1	5%
J	Memphis	12	6	50%
K	Memphis	25	14	52%
L	Memphis	41	8	20%
M	Memphis	35	26	71%
N	Memphis	27	2	7%
O	Memphis	13	1	8%
P	Memphis	35	9	26%
Q	Memphis	20	5	25%
R	Memphis	12	1	8%
S	Memphis	35	6	17%
T	Memphis	23	1	4%
U	Nashville	26	4	15%
V	Nashville	23	3	13%
W	Nashville	36	8	22%
X	Nashville	26	9	35%
Y	Nashville	20	4	20%
	Mean	23.52	5.24	21%

*We received one response from a school that is no longer in operation

Data Analysis

Quantitative data was analyzed using SPSS. Our survey's breadth allowed us to complete a variety of statistical tests and delve deeply into factors relating to teacher attrition in Tennessee charter schools.

Out of the many variables that comprised our survey, we endeavored to create scales to represent each of the conceptual buckets that made up our research framework. Each conceptual theme (instructional support compensation, school conditions, burnout) was surveyed using a previously constructed scale. A principal factors analysis revealed four potential factors in the survey questions. We examined the items that had a factor loading of at least 0.4, and the results confirm the four scales in our conceptual framework. Reliability analyses were then run, and all scales resulted in Cronbach's Alphas greater than 0.8, indicating a high degree of reliability.

Table 2: Cronbach's Alphas of Scales	
Burnout	0.92
School Conditions	0.9
Compensation	0.8
Instructional Support	0.92

Once our scales were created, we ran a variety of statistical tests to compare means between the groups that made up our units of analysis. Tests were run between elementary and secondary schools, "startup" and established schools, and charter affiliations (local or national charter network membership) and standalone school types.

We also compared differences between teacher characteristics as well: race, gender, years of teaching experience, age, and degree status. Depending on the nature of the variables being compared, we utilized Cross tabs and Chi Square Tests of Independence, T-Tests of the Difference in Means, or ANOVA (including a Tukey Analysis) to determine impacts of various variables on our scales.

Initially, we had hoped to incorporate longitudinal teacher attrition data into our analysis, but we were unable to secure data to run this analysis. In its place, instead we created a dichotomous future plans variable (plan to remain teaching in my building and plan to leave my building/unsure) in order to run a logistic regression as a predictive model. Due to the limited number of responses, we combined responses from the "unsure" and "plan to leave" categories

to limit participants' likelihood of being identified. We ran additional multivariate, linear regressions to examine school satisfaction and network satisfaction as predictive measures in lieu of attrition data.

All of the quantitative data was viewed through a lens that was informed by both the extant literature and the qualitative aspects of our survey. Decisions to collapse respondent groupings were made through this lens and with a deference to our sampling constraints as well. Any recoded variables were recoded into different variables to ensure that we were able to maintain a high degree of data integrity for our dataset.

Recognizing the descriptive value of qualitative data, we also posed several open-ended questions within the survey that allowed participants to identify their rationale for leaving or staying at their current school site. After reviewing participants' responses, the research team independently categorized each answer within our four contextual categories (burnout, school conditions, compensation, instructional support) or placed answers in an "other" category if they did not align squarely within our design. After agreeing upon a final categorization of all responses, we used various quotes throughout the body of our report to provide color and illustrative description of our quantitative findings. While the quotes are genuine, all names and identifying information attached to quotes are artificial and bear no relationship to actual participants.

Findings

Project Question 1: How do teachers at Tennessee Charter Schools rate their satisfaction regarding four common causes of teacher attrition (instructional support, compensation, school conditions, burnout)?

The extant literature draws clear connections to teacher attrition from many sources, but some of the strongest connections come from four factors: instructional support compensation, burnout, school conditions, and compensation. We surveyed teachers to learn their perceptions of these factors in order to gather contextual information regarding their future career plans. The descriptive statistics for these thematic buckets are reported in Table 3 below.

Table 3: Descriptive Statistics for Individual Scales

	N	Min	Max	Mean	SD
Instructional Support	101	1	4.47	3.30	0.68
Compensation	117	1	5	3.28	0.77
School Conditions	121	1	4.5	3.48	0.64
Burnout	109	1.42	5	3.59	0.81

Instructional Support

When it comes to teacher retention, extant literature draws a clear connection between instructional support a teacher receives and retention (Ingersoll, 2001; Borman & Dowling, 2009; Grissom, 2011). Teachers who choose to leave their schools frequently reference poor management as a factor (Johnson & Birkeland, 2003), and it can have a significant influence over a teacher's organizational commitment (Price, 2012). As Stuit and Smith (2012) report, "The most common reason given by charter school teachers for

voluntarily leaving the teaching profession was that they were dissatisfied with the school. Furthermore, 47 percent of charter school teachers who voluntarily switched to different schools did so because they were dissatisfied with either the workplace conditions or administrator support in their previous schools" (p. 3).   According to Gross (2011), lack of administrator support is the number one factor teachers report for why they leave their schools.

This is good news for charter schools in Tennessee, as teachers from our sample reported feeling well supported by their administrations, according to our qualitative findings. One teacher stated, "I have so much respect for my Principal and Assistant Principal. I don't want to work for anyone else right now." Numerous others shared this sentiment, using words like "trust," "respect," and "valued" to describe their relationships with school leaders. In fact, of those who report being likely to remain in their schools for the next year, a total of seventeen respondents named positive relationships and support from their administrators as positive contributing factors. One teacher said, "The support we receive here is unparalleled to anything I have ever experienced."

> *"I simultaneously feel incredibly challenged and incredibly supported."*
> *-Chuck*
>
> *"Staff are valued and supported; I couldn't ask for a better school!"*
> *-Portia*

As the data shows, however, not all teachers feel overwhelmingly positively about the instructional support they are receiving, as the mean is close to neutral. As one teacher stated, "I feel supported by [the other teachers at

my school] more than I do by my administration." Teacher networks of support for each other are a proven area of impact on retention, as discussed by Ingersoll and Strong (2011), who found that access to quality mentoring by their peers has a positive impact on retention. Newmann and Wehlage (1995) found that in successful schools there were "opportunities for teachers to collaborate and help one another achieve the purpose; and teachers in these schools took collective—not just individual—responsibility for student learning" (p. 3).

The importance of peer support is evident in numerous comments made by teachers in our sample, like the following: "I feel valued and respected in this position, and I feel like I'm able to be an effective teacher at my school. The staff is supportive and professional, and the students, for the most part, are eager to learn" and "I love my school. It feels like a family, with an incredibly supportive administration and close staff." These teachers indicate that support from both leadership and peers are significant. These types of peer-to-peer support systems can be impactful, but the extant literature makes clear that a supportive administration is also necessary.

Compensation

The extant literature indicates that while compensation can impact teacher attrition (Shen, 1997; Ingersoll, 2001; Borman & Dowling, 2008), the relationship is not as strong as other factors that impact teacher decision-making about job changes. Allen (2005) found that while increasing compensation is connected to increased retention rates, working conditions might trump salary as a factor in retention. According to Gross (2011), compensation is one of the top five factors that influences charter school teachers' retention rates, but it is number five on the list.

The mean for this scale was 3.28 (see Table 3). This mean, which is the closest to neutral of all scales, indicates that teachers feel relatively neutral about their current levels of compensation. This may indicate that compensation is not a major consideration for teachers when thinking about job satisfaction, which is consistent with the trends in the literature related to teacher compensation.

Within our qualitative data, fewer teachers mentioned compensation--either positively or negatively--as an independent consideration for their future plans. Several teachers mentioned being "paid well," but it was discussed in the context of other more significant factors for them. Two teachers mentioned feeling negatively about the amount of hours they work compared to the amount they are paid, but also mentioned this briefly and focused their comments largely on other factors.

"I am paid much less than other schools and work a lot more hours than they do."
-Yolunda

School Conditions

School conditions can be a complex bucket to unpack, but it includes factors such as physical features of the school building, organizational structures that define positions in the school, the cultural features of the school (values, traditions, and norms), psychological features of the school (mindsets), and educational features (curriculum and management) of the school (Johnson, 2006). This factor ranks number two of the top five factors related to teacher attrition (Gross, 2011).

Student behavior is another key component of working conditions. Schools with higher instances of behavioral issues see higher rates of teacher attrition (Simon & Johnson, 2013; Ladd, 2011; Marinell & Coca, 2013). School-wide norms for behavior and responses to discipline problems are important factors for teachers when considering where to work (Marinell & Coca, 2013) and teachers seek environments where both students and adults have a sense of safety (Allensworth, Ponisciak, & Mazzeo, 2009).

As it relates to working conditions, high-poverty schools can pose unique challenges for teacher turnover (Simon & Johnson, 2013; Johnson, Kraft, & Papay, 2012). Simon and Johnson (2013) report, "Thus, mounting evidence suggests that the seeming relationship between student demographics and teacher turnover is driven not by teachers' responses to their students, but by the conditions in which they must teach and their students are obliged to learn" (p. 1). Poor facilities, lack of sufficient funds, and assignment structures all factor into teachers' decisions.

For this scale, again from one to five, our sample mean is 3.48. This is another area where teachers collectively do not have strong feelings positively or negatively, but it does trend closer to five and is a higher mean than that of the instructional support and compensation scales.

According to the qualitative data, this area is a clear success for Tennessee charter schools, especially in how teachers discuss the mission of their schools and the positive impact that has on their career decisions. One comment illustrates how significant alignment with mission can be. He stated, "Life is far from perfect, but we are all working toward a common vision." This quote shows that despite recognizing there are some issues, the connection to a common vision is powerful. There is the sense that teachers, as one participant put it, "feel like a part of something big."

Within our sample, many teachers expressed feeling positively about their working conditions. One claimed to feel like they work in "a highly functioning environment" while another mentioned loving the "orderliness in the building." Many of these factors are within the control of the school leaders, so the positive feelings teachers have for their instructional support possibly seep into this category as well.

> *"[My school] is a safe and nurturing place for students."*
>
> **-DJ**

Burnout

Burnout is another factor related to attrition that is analyzed in the extant literature. Frequently, charter schools experience longer hours than their traditional public school counterparts, which can factor into burnout. Longer hours paired with the increased teacher decision-making that often comes with work in a charter school can create burnout. According to Malloy & Wohlstetter (2003), increased decision-making may have the unintended consequence of actually increasing teacher workloads, and that while teachers value participating in school decision-making, the time commitment this often entails puts them at greater risk for burnout.

According to Torres (2014), an unsustainable workload is considered the primary cause of turnover in charter schools, as one in three teachers who rated their workload as "unmanageable" left their school compared to one in ten who did not rate their workload this way. There is significant variation within the literature in this area, as different teacher characteristics and school characteristics

cause different feelings of burnout (Torres, 2014). These differences will be unpacked in later research questions. In general, charter school teachers report significantly higher workloads than their traditional public school peers (Ni, 2012).

Overall, it is clear that hours worked, an increased role in school decision-making, and increased workload may lead charter school teachers to feel burnt out. However, as Torres (2014) notes, it is not necessarily the amounts of these factors that lead to burnout, but rather how teachers' perceive this work. If teachers feel deeply engaged in their work, fit with the organization, and benefit from the increased time or workload, feelings of burnout are less likely.

Similarly to the other scales, teachers responded to statements related to factor that indicate burnout. A higher mean on the burnout scale (closer to five) indicates that teachers are feeling less burnt out, while a lower score (closer to one) would indicate that they feel more burnt out. Our sample mean was 3.59 for this scale (see Table 3). The mean is still close to neutral, but of our four scales, this scale is the closest to one end of the spectrum.

As it relates to burnout, one teacher stated, "The school that I work at requires us to work hours that make it hard to cultivate a life outside of the school." However, our qualitative findings affirm the idea that if teachers feel more connected to the work they do, they may not feel the effects of burnout as strongly. One teacher from our sample stated, "The days are exhausting and draining, but I find teaching rewarding and this is what I feel called to do." If charter school teachers in Tennessee feel like their work is having an impact, like this teacher, they may be able to avoid feelings of burnout despite structural factors that may predict it.

The above synthesis illustrates how complex and interconnected these factors are. All of our reported scales are near neutral, which seems appropriate as we aggregated all teachers' responses together to get these means. In later questions, we will further parse out how teacher characteristics and school qualities impact attrition. As far as question one is concerned, one teacher's comment illustrates clearly how these variables all work together: "I love our school's mission and ethos. I admire our school leaders. I love the people I serve with. The scholars are amazing. I love it all. This is my dream job."

> *"[There is] too much bullshit, hours are too long, people are awful."*
> **-Molly**

Project Question 2: How do teacher characteristics (gender, race, age, teaching experience, educational attainment) influence teachers' attrition plans at Tennessee Charter Schools?

A broad catalog of literature highlights the influence of various teacher characteristics on teachers' likelihood of attrition. As Stuit and Smith (2012) have unfortunately assessed, "Charter schools tend to hire people who are at greater risk of both leaving the profession and switching schools" (p. 3). Among the various teacher characteristics that contribute to this increased likelihood, we collected information regarding each teacher's gender, race, age, years of teaching experience, and educational attainment. Below, we detail the intersection between these characteristics and teachers' reported plans to remain in their current school or depart. Due to our sample size, we report future plans in two categories for each background characteristic: those planning to remain in their current school and those unsure or planning to leave their current school. We also report percentages by the background characteristic under scrutiny; this allows for careful examination of the differences between each of the background characteristics.

Table 4: Future Plans by Gender

Gender	Plan to Remain	Plan to Leave or Unsure	Total Number Within Gender Band
Men	54%	45%	24
Women	61%	39%	74

Gender

In their seminal meta-analysis of teacher attrition, Borman and Dowling (2008) described gender as a prevalent teacher characteristic connected to teacher attrition and found women to be 1.3 times more likely to leave teaching than their male counterparts. However, some findings do not document a relationship between gender and differential attrition rates (Strunk & Robinson, 2006). Overall, our sample was 75% female, which expectedly reflects the high female population of the current teaching workforce.

Of male teachers in our sample, 13 plan to continue teaching in their current building and 11 plan to leave or are unsure. This represents a near even divide (54% and 45%, respectively). For female teachers, 44 plan to continue teaching in their current building and 28 plan to leave or are unsure. This split is not as even as men, with a 61% to 39% difference. To measure the statistical value of these trends, we performed a Chi-Square Test of Independence: X2 (1 N=98)=.360, p=0.55. In our sample, there is not a statistically significant relationship present between gender and teachers' future plans. This finding is similar to existing studies that fail to document any significant relationship between gender and differential attrition rates (Strunk & Robinson, 2006).

Table 5: Future Plans by Race			
Race	Plan to Remain	Plan to Leave or Unsure	Total Number Within Race Band
Caucasian	68%	32%	76
African American	20%	80%	10
Hispanic; Asian/Pacific Islander; Mixed Race; Other	33%	67%	12

Race

While the teacher workforce continues to be predominantly female, it is also increasingly diverse (Ingersoll et al., 2011). Describing the effects of a teacher's race on their likelihood of attrition is a two-way street. In addition to considering the independent influence of a teacher's race, factoring in the relationship between a teacher's race and the race of her students is vital (Renzulli, et al., 2011; Mueller, Finley, Iverson & Price, 1999). Notably, white teachers who teach in racially mismatched schools are more likely to leave the profession (Strunk & Robinson 2006; Borman & Dowling 2008; Renzulli, et al., 2011). As the typical charter school teaching population is majority-white, this represents a frequent point of tension, but charter schools also hold the possibility of limiting the influence of racial mismatch on teachers' attrition (Renzulli et al., 2011). Further, schools with a higher percentage of minority students experience teacher attrition at higher rates than other schools (Strunk & Robinson, 2006). Within our sample, we collected teachers' self-reported race in six categories: African American, Asian/Pacific Islander, Caucasian, Hispanic, Mixed Race, and Other.

As outlined above, our sample is overwhelmingly Caucasian (77% of total sample). Within this group, 68% plan to teach in their current building next year and 32% are unsure or plan to leave. The next largest demographic group, African Americans (10% of total sample), has 20% of teachers planning to teach in their current building and 80% unsure or planning to leave. While there are other races within our sample, the size of each race band limits the value of any individual comparisons between Hispanic, Pacific Islander, or Mixed Race teachers. There were additionally five

teachers that identified as Other. For practical value, we combined these racial groups into a third racial category with twelve total teachers. This group, composed of several independent racial categories, has 33% of its teachers planning to remain and 67% planning to leave or unsure.

To measure the statistical value of these trends, we performed a Chi-Square Test of Independence and compared the future plans of the two largest racial groups: Caucasian teachers and African American teachers. There was a significant relationship present: $X2(5, N=98)=15.12$, $p=0.01$, and while this result is suggestive, there are concerns about the generalizability of these results due to the small sample size of African American teachers.

Table 6: Future Plans by Age			
Age Band	Plan to Remain	Plan to Leave or Unsure	Total Number Within Age Band
18-25	58%	42%	38
26-35	59%	41%	46
36+	64%	36%	14

Age

Various studies have demonstrated the salience of age as a factor affecting teacher attrition, with younger teachers leaving at much higher rates than their older counterparts (Borman & Dowling, 2008; Miron and Applegate, 2007; Ingersoll, 2001). Of teachers in our sample aged 18-25, 58% plan to remain in the current building next year and 42% are unsure or plan to depart. Those aged 26-35 had nearly identical groupings with 59% planning to remain in their current building and 41% unsure or planning to depart. The oldest and smallest age grouping, those aged 36 and older, have the highest percentage of stayers with 64% planning to remain in their current building and 36% unsure or planning to leave. To measure the statistical value of these trends, we performed a Chi-Square Test of Independence: $X2(2, N=98)=.182$, $p=0.91$. There is not a statistically significant relationship present when considering different age groups and their future plans.

Table 7: Future Plans by Experience			
Years of Experience	Plan to Remain	Plan to Leave or Unsure	Total Number within Group
Less than 5 Years	60%	40%	65
5 or More Years	58%	42%	33

Experience

Charter schools are typically staffed by younger, inexperienced teachers compared to traditional public schools (Stuit and Smith, 2012; Gross & DeArmond, 2010), with at least double the number of teachers possessing five years of experience or less (Burian-Fitzgerald, Luekens, & Strizek, 2004). As young teachers begin their career in any school setting, they stand the highest chance of leaving the field during their first five years, with nearly half of beginning teachers departing the profession within this time window (Smith & Ingersoll, 2004; Fry, 2009; Hanushek, 2007). Using five years as a dividing line, we delineated two categories of teachers within our samples: novice teachers (four years or less teaching experience) and veteran teachers (five or more years).

Of the 65 novice teachers we surveyed, 39 plan to continue teaching in their current building, and 26 plan to leave or are unsure (60 & 40%, respectively). Of the 33 veteran teachers we surveyed, 19 plan to continue teaching in their current building, and 14 plan to leave or are unsure (58 & 42%, respectively). Within both groups, the largest portion of teachers plan to remain teaching within their building. To measure the statistical value of these trends, we performed a Chi-Square Test of Independence: $X2(1, N=98)=.053$, $p=0.82$. There is no statistical significance between the differences relating to years of experience.

Table 8: Future Plans by Educational Attainment			
Highest Degree Attained	Plan to Remain	Plan to Leave or Unsure	Total Number within Group
Bachelor's Degree	71%	29%	35
Master's Degree or Higher	52%	48%	63

Educational Attainment

Charter school teachers are more likely to enter the field from a selective undergraduate university than than their traditional public school counterparts (Baker & Dickerson, 2006; Burian-Fitzgerald, et al., 2004) but are less likely to possess a master's degree (Cannata & Penaloza, 2012). To understand how educational attainment affects teachers' future plans within our sample, we compared two groups of teachers: those possessing only a bachelor's degree and those possessing a master's degree or higher.

Of teachers in our sample, 36% have only a bachelor's degree and 64% have a master's degree or higher. For those teaching with only a bachelor's degree, 71% (25) plan to remain in their current building and 29% (10) plan to leave or are unsure about next year. For those teaching with a master's degree or higher, 52% (33) plan to remain in their current building and 47% (30) plan to leave or are unsure about next year. To test the statistical significance of these findings, we ran a Chi-Square Test of Independence: $X2(1, N=98)=3.38$, $p=0.06$. There is no statistical significance between varying degree levels and future plans.

Project Question 3: How do variations in charter school characteristics (national CMO vs. local CMO vs. standalone school, established vs. startup, elementary vs. secondary) influence teachers' attrition plans at Tennessee Charter Schools?

Table 9: Future Plans by Organizational Structure of School

Org. Structure	Plan to Remain	Plan to Leave or Unsure	Total Within Type Band
Local Network	54%	46%	28
National Network	43%	57%	7
Standalone	64%	37%	63

Network CMO vs. Local CMO vs. Standalone School

Differences among type of charter schools and teacher attrition have not been widely researched, however there are some organizational connections to be made. Community-based, single-site schools have been found to be less-likely to expand (Henig, Holyoke, Brown, & Lacireno-Paquet, 2005) which may allow for school leaders to keep close control over operations and mission-adherence.

In an attempt to uncover whether organizational structure impacts teacher attrition, we divided our findings among network CMOs, local CMOs, and standalone, single-site schools. Of the 28 teachers in local network schools in our sample, 15 (54%) plan to remain in their current schools, while 13 (46%) plan to leave or are unsure. Of the 7 teachers in national network schools, 3 (43%) plan to remain in their current schools, while 4 (57%) plan to leave or are unsure. Of the 63 standalone school teachers, 40 (64%) plan to remain in their current schools, while 23 (34%) plan to leave or are unsure. The differences among

these groups were not statistically different: X2, (2 N=98) = 1.62, p=0.45. The extant literature in this area may help explain why of our sample, standalone school teachers report the highest percentage of planning to remain in their schools next year.

Within our qualitative findings, two teachers in our sample expressed this sentiment; one stated, "I am a founding staff member of my school, and feel obligated to my students and families" and another stated, "[My school] is part of a unique and wonderful community from the students to the stakeholders." This data may be clouded by findings that strong mission-oriented charters find success, and many of the charter schools from our sample, irrespective of

> ## "I am burnt out."
> ### -Carrie

management type, are mission-oriented (Henig et al., 2005). Another key component of this breakdown is the existing trend that independent charter schools, i.e. those not heavily managed by authorizers, feel more in control of their decisions and operations (Zimmer et al., 1999). The breakdown of management between district authorizers and CMOs is an important distinction, and should be an area for future research.

Established vs. Startup

In addition to organizational structure, another consideration is the age of the school and its impact on attrition patterns. Differences have been identified between the success of long-standing public schools that have been converted to charters and startup charter schools (Henig et al., 2005). Among theses differences, is the observation that start-up schools face unique, and often larger challenges than established schools (Zimmer et al., 1999). These challenges may include curriculum design, developing accountability metrics, and selecting and refining leadership structures and systems (Griffin & Wohlstetter, 2001). Due to these unique challenges, charter authorizers report spending more time in startup charter schools to ensure close oversight (Zimmer et al., 2003). This close attention may contribute to our finding that teachers in younger schools report being more likely to return than their

established school counterparts. However, startup charters often suffer from the "new school effect" in which performance of the school starts off low and remains so for the first few years of operation (Kelly & Loveless, 2012).

According to our quantitative findings, of the 12 teachers in schools less than three years old in our sample, 8 (67%) plan to remain in their current schools, while 4 (33%) plan to leave or are unsure. Of the 86 teachers in schools more than three years old, 50 (58%) plan to remain in their current schools, while 36 (42%) plan to leave or are unsure, however these group differences are not statistically significant: X2 (1 N=98).317, p=0.57.

> *"There is too much stress, too many expectations."*
>
> **- Stephanie**

In general, it is difficult to unpack exactly what factors teachers are considering, if any, related to organizational structure or age of school due to the general finding in the extant literature that charter schools, even those of similar organizational structure or age, are so varied; two schools the same age with the same organization structure may be vastly different from one another due to the autonomy often granted to charter schools (Brown, Henig, Lacireno-Paquet, & Holyoke, 2004). However, it would seem according to the literature that the "new school effect" would make teachers feel less satisfied, so it may be the case that school leaders from the startup schools in our sample have found ways to mitigate this for their teachers. Again, this may be an area for further investigation to identify these unique differences among Tennessee charter schools.

Elementary vs. Secondary

Grade level taught has been identified as a strong predictor of attrition (Miron & Applegate, 2007). Of the 30 elementary school teachers in our sample, 18 (60%) plan to remain in their current schools, while 12 (40%) plan to leave or are unsure. Of the 68 secondary teachers, 40 (59%) plan to remain in their schools, while 28 (41%) plan to leave or are unsure. Our sample indicates that there is no significant difference in plans between elementary and secondary school teachers, which is inconsistent with what the extant

literature shows. Ingersoll (2001) reports that a statistically significant difference in turnover exists between elementary and secondary schools. Grades that experience the highest levels of teacher turnover are grades 6, 7, 10, and 11, all secondary grades (Miron & Applegate, 2007). There were both no practically or statistically significant differences in grade level plans to return or leave among teachers in our sample: X2 (1 N=98) = .012, p=0.91.

Project Question 4: Within our framework, what factors predict teacher attrition at Tennessee Charter Schools?

In the absence of attrition data, regressions were run as proxies to represent teacher intentions for their employment decisions. As our project questions revolve around teacher satisfaction and their future plans for their employment, we utilized regression analysis to model proxies for teacher attrition. While these regressions cannot take the place of raw attrition data, we believe that the predictive nature of regression and the alignment of the future plans and satisfaction plans are reliable stand-ins for attrition data.

The literature that informs our analysis throughout posits that there is a relationship between school conditions, teacher characteristics, and school characteristics on teacher attrition. Each previous project question revolves around the impact of each of factor on attrition decisions; this section will serve to connect the factors together in a manner that will predict how teachers determine to stay in the profession or leave.

Future Plans Regression Analysis

A logistic regression was run with future plans recoded to be dichotomous (plan to remain in building as a teacher, unsure/plan on leaving the school or profession) as the dependent variable. Our sample size necessitated that this variable be recoded as dichotomous, as reliable analysis would not have been possible if we did not recode. Our regression model indicated that approximately 70% of the variation in the future plans of teachers (Nagelkerke R2 = 0.699) is explained, and that it accurately predicted 88% of teacher plans correctly. The model has a good fit and overall is statistically significant at p<0.001. Within the model, several variables yielded statistically significant results: burnout, teachers aged 36 or older, African-American teachers, and teachers from other racial groups (not African-American or White).

Table 10: Future Plans Logistic Regression

Future Plans Logistic Regression: Variables in the Equation		Coefficient	S.E.	Odds Ratio
School Conditions	Burnout Scale	-3.632	0.899	0.026**
	School Conditions Scale	1.014	0.929	2.756
	Compensation Scale	-0.701	0.56	0.496
	Instructional Support Scale	-0.103	0.648	0.902
Charter School Characteristics	Local Network	0.128	0.866	1.137
	National Network	-0.413	1.893	0.662
	Elementary Schools	-0.443	1.47	0.642
	"Startup" (Schools less than 3 years old)	-1.78	1.779	0.169
Teacher Characteristics	Teachers aged between 26-35 years	0.95	0.961	2.585
	Teachers older than 36+ years	-3.459	1.728	0.031*
	African-American	2.576	1.165	13.138*
	All other racial groups	3.257	1.32	25.968*
	Bachelor's Degree	-1.152	0.872	0.316
	Males	0.585	0.839	1.796
	Years of Teaching Experience	0.178	0.182	1.194
	Constant	10.19	3.497	26641.347**

a Variable(s) entered on step 1: burnout_all, school_conditions, compensation, instructionalsupport, local_network, national_network, elementary, Less than 3 years Old, 26-35 year olds, 36+ Year Olds, African-American, all_other_races, Bachelors, male, Prior to the current school year, how many years of teaching experience do you have?.
Dependent Variable: Plan to stay or plan to leave/unsure

An improvement of one unit in the burnout scale (indicating that teachers are less likely to burnout) is predicted to result in a 97% higher likelihood of teachers choosing to stay in the profession. This is in line with the literature, as teacher burnout is a factor for teachers leaving the profession (Torres, 2014). While many factors likely impact the decisions teachers make regarding their future professional plans, according to our model, limiting teacher perceptions of burnout will help to increase the likelihood that teachers remain in the profession.

"Older" teachers in our sample (teachers aged 36+) resulted in a significant finding that there is a very small predicted odds of this group deciding to leave the profession/being unsure of their future (0.031 times the odds of younger teachers). Put differently, teachers who are younger than 36 are 97% more likely to leave the profession or to be unsure of their future in the profession. "Older" teachers are likely more settled in life, more professionally at ease with the work of the job, and less likely to be looking for a change. The bigger takeaway from this finding is that younger teachers have a substantially higher likelihood of leaving the profession or being unsure of wanting to stay.

Our model resulted in minority teachers (African-American and all other, not-White, races) having a significantly and substantially higher predicted likelihood to leave the profession than their White peers. These oversized odds ratios produced by our model are likely the result of a small sample of teachers in these subgroups, and as such are not viewed as being of practical significance to our study. However, even though our sample is predominantly comprised of White teachers (as is the norm within the charter school teaching population broadly), the higher likelihood of leaving the profession for non-White teachers is mostly consistent with the literature.

Teacher School Satisfaction Regression Analysis

In order to best approximate teacher plans for attrition in the absence of express school level data, we combined analysis of the future plans regression with separate models to determine teacher satisfaction with both their schools and their networks (for only those teachers who teach in local or national charter networks). These additional (multivariate, linear) regression models, in consort with the future plan logistic regression, will bring to the fore factors that influence teacher decisions to leave. As the extant literature offers insight around the relationship between satisfaction and future plans on remaining in the field (Allen, 2005), these two analyses provide valuable insight into factors that are impacting teachers at Tennessee charter schools.

The linear, multivariate regression of teacher satisfaction with their school resulted in a model that explains 73% of variance and that yielded significant findings for several of the variables in the model. Compensation, burnout, and teachers aged between 26 and 35 years were the significant variables in our model and offer valuable information about teacher satisfaction.

Our model indicated that positive changes in teacher compensation would result in a prediction that satisfaction would increase a moderate amount (.237). While this is not unexpected, it is not fully in line with what the extant literature discusses. As our model includes teachers at all levels of experience and age, this finding is of particular interest to possible next steps by practitioners in the field across Tennessee. While the literature does not indicate that compensation is much of a driver for teachers to leave the profession, teacher satisfaction in Tennessee charter schools will increase with an improved compensation model. This finding suggests a possible route of inquiry for principals across the TCSC network. Compared to traditional public schools, charter schools typically have an enhanced ability to structure salary levels differently, even if they often choose to employ a step-based salary schedule (Kowal, Hassel & Hassel, 2007). Principals could use this increased flexibility to tailor unique compensation models with an explicit intention of increasing teacher satisfaction.

Table 11: School Satisfaction Coefficients

School Satisfaction Coefficients[a]		Coefficient	S.E.	Significance
School Conditions	Burnout Scale	0.978	0.125	0.000**
	School Conditions Scale	-0.012	0.176	0.947
	Compensation Scale	0.237	0.109	0.032**
	Instructional Support Scale	0.216	0.132	0.107
Charter School Characteristics	Nashville	-0.214	0.232	0.36
	Local Network	0.047	0.212	0.826
	National Network	0.037	0.369	0.92
	Elementary	-0.144	0.222	0.52
	Less than 3 years Old	0.092	0.268	0.734
Teacher Characteristics	Less than 5 Years Teaching Experience	-0.016	0.319	0.96
	26-35 year olds	-0.366	0.179	0.045*
	36+ Year Olds	-0.158	0.295	0.594
	African-American	-0.106	0.265	0.69
	Hispanic	-0.419	0.341	0.223
	Other Race	-0.469	0.317	0.144
	Bachelors	-0.177	0.177	0.322
	No Education Degree	0.13	0.19	0.494
	male	0.064	0.176	0.718
	Years of Teaching Experience	0.044	0.051	0.388
	(Constant)	-1.225	0.62	0.052

[a] Dependent Variable: How satisfied are you with teaching at your current school?
* Significant at the $p<0.05$ level
** Significant at the $p<0.01$ level

Our model predicts a substantial decrease in satisfaction for teachers who are between 26-35 years old relative to teachers who are older or younger than this portion of our sample. These group of teachers are likely entering the "second" stage of their careers, and they are much more apt to be exploring other professional and/or personal options in their life. This significant finding is particularly interesting in light of the future plans model's finding regarding teachers older than 36. As teachers older than 36 have a substantially higher likelihood of wanting to remain in the profession and teachers between 26-35 are less satisfied, creating conditions for these "second" stage teachers to be more satisfied will likely result in teachers who wish to remain in the profession.

The final significant variable in our teacher satisfaction model is burnout. According to our model, decreasing burnout will result in a very large increase in satisfaction. As noted previously, in both our analysis and the literature, decreasing teacher perceptions of being burned out will increase satisfaction, and this regression model bears that out. Burnout was also a significant finding in our logistic model of future plans. This additional significant finding shines an even brighter light on the impact burnout has on teachers' satisfaction with their schools and the likelihood that they will remain in the profession.

Charter Network Teacher Satisfaction Regression Analysis

Teacher satisfaction with their networks followed a similar, but less distinct pattern. Our model described a lesser degree of the variability at ~66%, which is reflective of our smaller sample of teachers who teach at schools in networks. The biggest revelation of this particular analysis is that the relative impact of burnout on attrition for teachers who teach in networks is substantially higher than teachers' satisfaction with their schools. The predictive impact of burnout on teacher satisfaction with their networks vs. their schools is 15% greater. Determining

Table 12: Network School Satisfaction Coefficients

Network School Satisfaction Coefficients[a]		Coefficient	S.E.	Significance
School Conditions	Burnout Scale	1.103	0.427	0.019*
	School Conditions Scale	-0.377	0.613	0.547
	Compensation Scale	-0.588	0.423	0.182
	Instructional Support Scale	0.616	0.461	0.199
Charter School Characteristics	Nashville	1.062	0.66	0.126
	National Network	0.916	0.982	0.364
	Elementary	1.067	0.806	0.203
Teacher Characteristics	Less than 3 years Old	-0.983	0.976	0.328
	Less than 5 Years Teaching Experience	2.91	1.843	0.133
	26-35 year olds	1.164	0.677	0.104
	36+ year olds	0.579	0.733	0.44
	African-American	0.966	0.65	0.155
	Hispanic	1.369	1.412	0.346
	Other Races	2.715	1.235	0.042*
	Bachelor's Degree	0.355	0.659	0.598
	No Education Degree	-0.203	0.611	0.744
	Male	-0.34	0.622	0.592
	Years of Teaching Experience	-0.533	0.31	0.103
	(Constant)	0.319	1.911	0.869

[a] Dependent Variable: How satisfied are you with the larger network/CMO with which your school is affiliated?
* Significant at the $p<0.05$ level
** Significant at the $p<0.01$ level

what the underlying impact of this large difference in impact is an area for further research.

The only other statistically significant finding for this model is for teachers who are races other than African-American, Hispanic, or White. This subgroup is very small, and while the results are statistically significant, we are confident than outliers in the data and the small sample of teachers who fit this description are accounting for these results and should therefore be generally discounted.

Overall Regression Analysis

A number of variables were found to have an impact in some manner on future plan decisions, school satisfaction, and network satisfaction. Each of these variables taken within their specific contexts provide valuable insight and helps to develop a broader conceptual understanding of the factors that push/pull teachers out of the profession. Within the three models that we created as proxies for teacher attrition, there was one variable that stood out above all others: burnout.

When viewing the results of the regressions through the lens of the extant literature on teacher attrition, the clearest outcome is that burnout is a prevalent and pervasive factor that has a large impact on teacher decisions to remain in the teaching profession. Teachers who identify as having a high likelihood of burning out are also more likely to decide to leave the profession, not be satisfied with their school, and are significantly more likely to be unhappy if their school is a part of a larger network. These findings clearly promote a course of action that should lead to initiatives designed to decrease perceptions of burnout and to determine with more clarity the underlying reasons why teachers in schools that are a part of charter networks are so much more likely to be burned out.

Limitations

The major limitations to our work result from the considerations and constraints that our sample size and response rate yielded. One of the major considerations is that though our sample consisted of all charter schools in Memphis and Nashville, we did not have the means to deliver our survey directly to all teachers within these schools. We relied on principals to forward the survey and information about our work to their teachers. Beyond seeing which schools teachers reported when they complete the survey, we had no way to know which principals actually forwarded our email, making it impossible to fully define our targeted population of teachers.

Due to our survey being distributed by principals, one threat to internal validity is that some teachers may have felt coerced into taking the survey or worried the principal would see the results. We assured teachers that the data we received would be confidential at the beginning of our survey instrument, however some teachers may not have been convinced by our statement as the survey request came from their principal. If teachers were fearful that their principals might have access to their responses, this is another factor that may explain the slightly positive skew in our findings.

Another consideration to make regarding our sample is because our survey was voluntary, we imagine that it took some intrinsic motivation for teachers to complete. This increases the likelihood that teachers who took the time to complete the survey had strong feelings they wanted to share; they were likely either very satisfied or very unsatisfied. In the case of our sample, the slightly positive skews of our means could indicate that teachers in our sample were more satisfied than teachers who opted not to complete it.

A final consideration is the time of year our survey was administered. Teachers completed our survey in the late fall during the first half of the school year. Due to this timing, teachers may not have had a clear idea yet what their plans would be for the following school year. The fact that teachers had only completed a portion of the school year at the time of our survey may help explain the decidedly positive skew we observed in our results, as factors like burnout or dissatisfaction with their school may not have had time to set in. Administration of this survey in the spring semester may lend itself to more realistic self-reporting of future plans from teachers.

Any of the above factors could explain the positive skew in our findings. Beyond those threats to internal validity due to our sampling methods, there are several threats to external validity to consider. First, there is some concern about the generalizability of our sample. Our sample does not exactly mirror what is known about the characteristics of charter schools teachers in the larger population. As discussed in the methods section, two areas we have identified in particular that limit generalizability are: 1) our sample is comprised of a higher percentage of teachers with advanced degrees than has been reported of charter school teachers across the country and 2) our sample has fewer years of experience than national averages for charter school teachers (Cannata, 2008).

A final limitation to consider is that for statistical purposes, we found it necessary to combine survey response data of teachers who reported that they plan to leave and teachers who reported that they were unsure whether they would return or not. This muddles our findings in some ways, because some of the teachers who report feeling unsure at this time may ultimately decide to remain at their schools. Though this combination prevents perfect breakdown, it is still useful for principals, however, because they can use this data to work to retain teachers who may be unsure.

Recommendations

Recommendation One: Mission Fit in Hiring

Our first recommendation is based on our findings from project question one, specifically in the area of school conditions. From comments made by teachers in our sample, it is clear that mission fit is an important part of job satisfaction. According to Bulkley (2003), clear alignment to a common mission between administrators and teachers is of importance to many charter management organizations.

Borrowing from the world of nonprofit management, mission statements have been used as important management tools that have the power to motivate employees and keep them focused on organizational goals (Brown & Yoshioka, 2003). As we are finding mission-fit to be an important contributing factor to teachers' desire to do their jobs despite other perceived difficulties, making this a larger part of the initial hiring process would be beneficial. In fact, recent studies have found that many successful CMOs consider "fit" as an important factor in recruiting and hiring efforts (DeArmond, Gross, Bowen, Demeritt, & Lake, 2012). The stronger a teacher feels about the mission of a school, the more likely they will be to persist in their roles. We believe principals should include a "mission-fit" activity in the hiring process. This could happen in a variety of ways, but what should be in place regardless of individual principal approach is a clear presentation of the school's mission and vision to candidates during the interview process. Candidates should be given an opportunity to reflect and describe how the mission and vision align with their personal beliefs about education and schooling. Candidates who connect strongly to the mission are then more likely to believe the work they do is important and connected to a bigger picture. Teachers will feel stronger camaraderie about working toward a common direction.

Recommendation Two: Robust Teacher Support Systems

Our second recommendation is also based on our findings from project question one, this time in the domain of instructional support. The literature makes clear that instructional support from a school leader is imperative for teacher persistence. Though most school leaders would likely agree that instructional support is a priority in their role, the reality is that school leaders wear many hats and can be stretched too thinly to implement the robust instructional support for their teachers they would like in many cases. As a supplement to their role as instructional leaders in the building, the implementation of a mentoring program, particularly for early career teachers, could be of huge benefit.

Relationships at work are an important factor in teacher retention, and mentoring programs are an important part of combating the isolation teachers can feel during their day-to-day work (Heider, 2005). This proven strategy to address isolation and to provide early career teachers with additional support could help ensure teachers are not slipping through the cracks feeling unsupported or unnoticed.

Many teachers from our sample described support from their colleagues as important for them as they consider plans for the upcoming school year. These support systems are operating in an unofficial capacity in many schools already, so formalizing some of these processes is an important step to capitalize on the benefits many teachers already perceive.

Recommendation Three: Align Workload to Teacher Interest & Limit Extraneous Responsibilities

The TCSC should encourage principals in the network to tap into teachers' passions and interests beyond the classroom. Many teachers in charter schools take on work that is not necessarily academic in nature. Addressing burnout does not necessarily mean reducing these responsibilities, but rather aligned them more closely to teachers skills and interests. Teachers must obviously teach content to their students, but principals could creatively structure other teacher responsibilities to incorporate teachers' interests. As we discussed in our findings section, burnout is often less concerned with total hours worked and more influenced by the value that teachers attach to their work. By incorporating teacher interest in job design, principals can harness otherwise latent energy in their teacher retention efforts.

Recommendation Four: Study High-Retaining Schools

Our fourth recommendation seeks to build on our findings of the importance of compensation, feelings of burnout, and the pressures that second stage teachers face. We recommend that the center conduct further study within its network to determine schools that are particularly successful at navigating these variables in their efforts to retain effective teachers. Although we have identified the impact of these influences within Tennessee Charter Schools, we cannot speak to the instructional practices that

successful schools are using to mitigate these factors. Developing a nuanced knowledge of instructional practices that affect teachers is key because of the underlying differences in teacher themselves.

As Cannata and Penaloza (2012) highlight, policymakers and principals should take care to not think of charter school teachers as a single, homogenous group that shares the same characteristics and work motivations. The TCSC should first work to identify schools with the highest rates of teacher retention across the state. By using existing data from the Tennessee Education Research Alliance, the TCSC should be able to note these schools easily. After identifying them for future study, the Center should conduct exploratory research into the administrative practices and unique school environments that make such high retention rates possible (with an explicit focus on compensation and feelings of burnout). By studying these high-performing schools, the TSCS could offer a teacher retention toolkit for principals to use in future human capital efforts. Although there are valuable resources that offer similar thoughts on the subject such as *The Irreplaceables* (2012), the TCSC would do well to learn from their own principals.

Recommendation Five: Organize Networked Improvement Communities

Considering the teacher-reported impact of burnout, the potential value-add of new compensation models for second stage teachers, and the demonstrated value of instructional support in teacher retention efforts, the TCSC should maximize its effectiveness in these areas. In order to ensure this occurs, the Center should unite principals across the state using the power of networked improvement communities. By organizing the structures and systems identified by Bryk and colleagues (2015), the Center should encourage continual experimentation of a working theory of improving teacher retention efforts in these key areas. It would be a mistake for the center to simply study high-performing schools and dispense a list of what administrators can learn from them. As Joseph Murphy (2016) would caution, "structural changes do not predict organizational outcomes" (p. 36). Principals should work under the guidance of a theory of improvement and engage in systematic, disciplined inquiry of their efforts. As they engage in these efforts, principals will develop an understanding of how the Center's recommendations work at the ground level, allowing "context issues that are key to successful change [to manifest] themselves as well" (Bryk et al., 2015, p. 121).

Recommendation Six: Pilot Compensation Models

Our regressions indicated that teacher burnout had the highest negative impact on satisfaction, but for teachers at schools in networks, compensation had a significant, substantial impact. Using the flexibility that charter schools have to determine things like compensation models, a recommendation to implement innovative compensation models to explicitly support increased satisfaction and retention would be an impactful strategy. Schools in the TCSC network should pilot new compensation models that take advantage of this flexibility.

Recommendation Seven: Enhanced Job Design for Second Stage Teachers

Within our study, teacher burnout proved to be a powerful predictor of teacher attrition. As a means of blunting this threat, the TSCS should work with schools to design enhanced teacher leadership roles across the network. As Curtis & Wurtzel (2010) note, second stage teachers desire "a sense of purpose and challenge in a job" and "expect to play an active role in their own career development, crave responsive leaders and systems, and want to advance their careers" (p. 155). By allowing second stage teachers to continue developing skills while staying in the classroom, network schools can enjoy the student achievement benefits of their most seasoned teachers staying put while reaping the ancillary reward of increased instructional support.

Conclusion & Next Steps

Education & Awareness   **Policy & Advocacy Leadership**   **Innovation & Incubation**   **Quality & Growth**
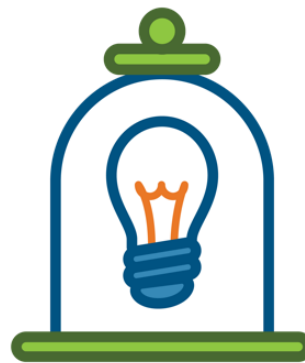
Our research represents a starting point for the Tennessee Charter School Center's attempts to better understand teacher attrition across its network. Rather than allowing our analysis to be an endpoint, we recommend it serve as a first course into a dedicated effort to support teacher retention efforts across the state. By surveying teachers and exploring four project questions, we discovered a relatively benign climate concerning teacher attrition.

Teachers reported lukewarm feelings regarding common causes of teacher attrition, and no background characteristic held practical significance for future plans. Comparing school types, we found no difference in future plans across school types, but we did discover an increased feeling of burnout among network charter school teachers. While not predictive, a thick line of research underscores the negative impact of burnout on teacher retention from year to year. Depending on a variety of factors, the human capital climate across the network could skew positively or negatively in the coming years.

Building on our findings, the TCSC should continue exploring teacher attrition patterns across its network in an effort to highlight successes and learn from them. We believe that undertaking our recommendations will position the Center well for future support of schools within its network.

The most impactful finding for the TCSC to apply going forward is to work closely with its constituent schools to create programming, guidance, and structures to address burnout. Teacher perceptions of burning out colored teacher decisions of whether to stay in the profession or leave, as well as the degree to which they were satisfied with both their schools and networks (if applicable). The greatest ROI for interventions to support reduced teacher attrition will be approaches that limit teacher burnout.

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Appendices

Appendix A: Full Survey

Tennessee Charter School Retention Survey

Q1 Dear Teacher: Thank you for taking the time to participate in this study. Below is general information about the survey. After reading the information, please click "Agree" if you would like to continue to complete the survey.   Purpose: The purpose of this survey is to gauge the impact of various factors affecting teacher retention in Tennessee charter schools. Examining teacher attrition in Tennessee charter schools will enable us to better understand sector dynamics, city trends, and recruitment/retention challenges. By answering the questions below, you will provide valuable information about the specific importance of these factors to Tennessee charter school teachers.   Who is Conducting this Survey? Three graduate students in the department of Leadership, Policy, and Organizations at Peabody College of Vanderbilt University are conducting this survey to fulfill a requirement for their Educational Doctorate. The information will be shared with the Tennessee Charter School Center.   Will Your Responses be Confidential? Your responses are protected from disclosure by federal statute (20 U.S.C., §9573). All responses that relate to or describe identifiable characteristics of individuals may be used only for statistical purposes and may not be disclosed or used in identifiable form for any purpose, unless otherwise compelled by law. How Will Your Information Be Reported?The information you provide will be combined with the information provided by others in statistical reports. No individually-identifiable data will be included in the statistical reports. We hope you will participate in this volunteer study, Peabody Research Team

μ   Agree (1)

Q2 In which city do you currently teach?
μ   Memphis, Tennessee (1)
μ   Nashville, Tennessee (2)

Display This Question:
     If In which city do you currently teach? Memphis, Tn Is Selected
Q3 Please select your school site. Note: No information you provide in this survey will be used to personally identify you or your responses.
μ   Arrow Academy (1)
μ   Aspire Coleman Elementary School (4)
μ   Aspire East Academy (54)
μ   Aspire Hanley Elementary School 1 (5)
μ   Aspire Hanley Elementary School 2 (13)
μ   Aurora Collegiate Academy Inc. (2)
μ   Circle of Success Learning Academy (3)
μ   City University Boys Preparatory Academy (55)
μ   City University Girls Preparatory Academy (6)
μ   City University School of Liberal Arts (7)
μ   City University School of Independence (69)
μ   Cornerstone Prep- Lester Campus (8)
μ   Cornerstone Prep- Denver Elementary (56)
μ   Greendot Fairley High School (10)
μ   Freedom Preparatory Academy Elementary (57)
μ   Freedom Preparatory Academy Elementary - Westwood (11)
μ   Freedom Preparatory Academy Middle (12)
μ   Freedom Preparatory Academy High (58)
μ   Granville T. Woods Academy of Innovation (59)
μ   Grad Academy Memphis (60)
μ   Humes Preparatory Academy (14)
μ   KIPP Memphis Academy Elementary (15)
μ   KIPP Memphis Academy Middle School (16)
μ   KIPP Memphis Preparatory Elementary (61)
μ   KIPP Memphis Preparatory Middle (9)
μ   KIPP Memphis Collegiate Elementary School (17)
μ   KIPP Memphis Collegiate Middle School (19)
μ   KIPP Memphis Collegiate High School (20)
μ   KIPP Memphis University Middle School (18)
μ   Leadership Preparatory Charter School (70)
μ   Libertas School of Memphis (71)
μ   Lester Prep Middle School (21)
μ   Klondike Preparatory Academy (22)
μ   Memphis Academy of Health Sciences Middle School (23)
μ   Memphis Academy of Health Sciences High School (MAHS) (24)
μ   Memphis Academy of Science and Engineering (25)

- μ   Memphis Business Academy Elementary School (26)
- μ   Memphis Business Academy Middle School (27)
- μ   Memphis Business Academy High School (28)
- μ   Memphis College Preparatory Elementary School (29)
- μ   Memphis Delta Prep (62)
- μ   Memphis Grizzlies Preparatory (30)
- μ   Memphis Rise Academy (32)
- μ   MLK Prep (33)
- μ   Moving Ahead School of Scholars (63)
- μ   Memphis School of Excellence (34)
- μ   New Consortium of Law and Business (35)
- μ   Omni Prep Academy -North Pointe Elementary School (36)
- μ   Omni Prep Academy-North Pointe Middle School (37)
- μ   Power Center Academy Elementary School (72)
- μ   Power Center Academy Middle School (38)
- μ   Power Center Academy High School (39)
- μ   Promise Academy - Spring Hill (40)
- μ   Promise Academy (41)
- μ   Scholar Academies - Florida Kansas (64)
- μ   Scholar Academies - Caldwell Guthrie (65)
- μ   Scholar Academies - Raleigh Egypt (66)
- μ   Soulsville Charter School (42)
- μ   Southern Avenue Charter Elementary School (43)
- μ   Southern Avenue Charter Middle School (44)
- μ   STAR Academy (45)
- μ   The Excel Center (67)
- μ   Veritas College Preparatory (46)
- μ   Vision Prep (47)
- μ   W.E.B. DuBois Elementary School of Arts and Technology (48)
- μ   W.E.B. DuBois Elementary School of Entrepreneurship (49)
- μ   W.E.B. DuBois High School of Leadership and Public Policy (50)
- μ   W.E.B. DuBois High School of Arts and Technology (51)
- μ   W.E.B DuBois Middle of Leadership and Public Policy (52)
- μ   W.E.B. DuBois Middle School of Arts Technology (53)
- μ   Wooddale Middle School (68)

Display This Question:
    If In which city do you currently teach? Nashville, Tn Is Selected

Q4 Please select your school site. Note: No information you provide in this survey will be used to personally identify you or your responses.
- μ   Brick Church College Prep (LEAD PS) (21)
- μ   Cameron College Prep (LEAD PS) (1)
- μ   East End Preparatory School (4)
- μ   Explore! Community School (22)
- μ   Intrepid College Prep (5)
- μ   KIPP Academy Nashville (KIPP Nashville) (6)
- μ   KIPP Nashville College Prep (KIPP Nashville) (7)
- μ   KIPP Nashville Collegiate High School (KIPP Nashville) (8)
- μ   KIPP Kirkpatrick (KIPP Nashville) (23)
- μ   Knowledge Academies (9)
- μ   Knowledge Academy High School (24)
- μ   LEAD Academy Middle School (LEAD PS) (10)
- μ   LEAD Academy High School (LEAD PS) (25)
- μ   LEAD Prep Southeast (LEAD PS) (26)
- μ   Liberty Collegiate Academy (RePublic Schools) (11)
- μ   Nashville Academy of Computer Science (RePublic Schools) (12)
- μ   Nashville Classical Charter School (13)
- μ   Nashville Prep (RePublic Schools) (14)
- μ   Neely's Bend College Prep (LEAD PS) (31)
- μ   New Vision Academy (15)
- μ   Purpose Prep (16)
- μ   Republic High School (Republic Schools) (32)

- μ   Rocketship Northeast Nashville (17)
- μ   Rocketship United Academy (27)
- μ   Smithson Craighead Academy (18)
- μ   STEM Preparatory Academy (19)
- μ   STEM Prep High School (28)
- μ   STRIVE Collegiate Academy (29)
- μ   Valor Flagship Academy (20)
- μ   Valor Voyager Academy (30)

Q5 To what extent are each of the following a problem at your school? Select one response per row:

	Serious Problem (1)	Moderate Problem (2)	Minor Problem (3)	Not a Problem (4)
Student tardiness (1)	μ	μ	μ	μ
Student absenteeism (2)	μ	μ	μ	μ
Student class cutting (3)	μ	μ	μ	μ
Teacher absenteeism (4)	μ	μ	μ	μ
Students dropping out (5)	μ	μ	μ	μ
Poverty (7)	μ	μ	μ	μ
Students come to school unprepared to learn (8)	μ	μ	μ	μ

Q6 To the best of your knowledge, how often do the following types of problems occur at your school? Select one response per row:

	Daily (1)	At Least Once a Week (2)	At Least Once a Month (3)	On Occasion (4)	Never (5)
Student racial/ethnic tensions (1)	μ	μ	μ	μ	μ
Widespread disorder in classrooms (4)	μ	μ	μ	μ	μ
Student verbal abuse of teachers (5)	μ	μ	μ	μ	μ
Student acts of disrespect for teachers other than verbal abuse (6)	μ	μ	μ	μ	μ
Gang activities (7)	μ	μ	μ	μ	μ

Q7 Please rate how strongly you agree or disagree with the following statements. Select one response per row:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
I have a great deal of respect for the school in which I work. (2)	μ	μ	μ	μ	μ
I feel the school in which I work is nurturing and caring. (3)	μ	μ	μ	μ	μ
I like the school in which I work. (4)	μ	μ	μ	μ	μ

Q8 To what extent do you agree or disagree with each of the following statements about your current school? Select one response per row:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
I am satisfied with my teaching salary. (1)	μ	μ	μ	μ	μ
If I could get a higher paying job in a different field, I'd leave teaching. (2)	μ	μ	μ	μ	μ
My salary adequately meets my needs. (3)	μ	μ	μ	μ	μ
The fringe benefits (insurance, investment plans, etc.) provided in my school are generous. (4)	μ	μ	μ	μ	μ
My school provides extras for their teachers in the way of leave, sabbatical, scholarships to further one's education, payment for coursework, etc. (5)	μ	μ	μ	μ	μ
The salary for teachers in my geographical area is comparable to other people with the same level of education. (6)	μ	μ	μ	μ	μ
My school provides an adequate retirement package. (7)	μ	μ	μ	μ	μ

Q9 To what extent do you agree or disagree with the following statements about teaching? Select one response per row:

	Strongly Disagree (28)	Somewhat Disagree (29)	Neither Agree nor Disagree (30)	Somewhat Agree (31)	Strongly Agree (32)
I look forward to teaching in the future (1)	μ	μ	μ	μ	μ
I feel depressed because of my teaching experiences (2)	μ	μ	μ	μ	μ
I get adequate praise from my supervisors for a job well done (3)	μ	μ	μ	μ	μ
The teaching day seems to drag on and on (4)	μ	μ	μ	μ	μ

Q10 How many hours are you required to work to receive BASE PAY during a typical FULL WEEK at your school?

Q11   Including hours spent during the school day, before and after school, and on the weekends, how many hours do you spend on ALL teaching and other school-related activities during a typical FULL WEEK at your school?

Q12 How satisfied are you with teaching at your current school?
- μ   Very Dissatisfied (1)
- μ   Dissatisfied (2)
- μ   Not Sure (3)
- μ   Satisfied (4)
- μ   Very Satisfied (5)

Q13 How satisfied are you with the larger network/CMO with which your school is affiliated?
- μ   Very Dissatisfied (1)
- μ   Dissatisfied (2)
- μ   Not sure (3)
- μ   Satisfied (4)
- μ   Very Satisfied (5)
- μ   My school is not affiliated with a larger network/CMO (6)

Q14 To the best of your knowledge, how effectively does your principal or school leader perform each of the following activities? Select one response per row:

	Very Ineffectively (1)	Somewhat Ineffectively (2)	Neither Effectively nor Ineffectively (3)	Somewhat Effectively (4)	Very Effectively (5)
Communicated respect for, and value of, teachers (1)	μ	μ	μ	μ	μ
Encouraged teachers to change teaching methods if students were not doing well (2)	μ	μ	μ	μ	μ
Worked with staff to meet curriculum standards (3)	μ	μ	μ	μ	μ
Encouraged professional collaboration among teachers (4)	μ	μ	μ	μ	μ
Worked with teaching staff to solve school and departmental problems (5)	μ	μ	μ	μ	μ
Encouraged the teaching staff to use student assessment results in planning and instruction (6)	μ	μ	μ	μ	μ
Worked to develop broad agreement among the teaching staff about the school's mission (7)	μ	μ	μ	μ	μ

Q15 How often does your principal provide support to you in the following areas? Select one response per row:

	Never (1)	A few times a year (2)	Once or twice a month (3)	At least once a week (4)
Teaching your subject matter or grade level (1)	µ	µ	µ	µ
Classroom management and discipline (2)	µ	µ	µ	µ
Using or incorporating a variety of instructional methods (3)	µ	µ	µ	µ
Using technology in your classroom (4)	µ	µ	µ	µ
Assessing students and interpreting assessment data (5)	µ	µ	µ	µ
Selecting and adapting curriculum, instructional materials, and/or writing lesson plans (6)	µ	µ	µ	µ
Interacting with parents (7)	µ	µ	µ	µ
Reflecting on your teaching practices (8)	µ	µ	µ	µ

Q16 What is your age?
µ   18-22 (1)
µ   23-25 (2)
µ   26-30 (3)
µ   31-35 (4)
µ   36-45 (5)
µ   46-55 (6)
µ   56-65 (7)
µ   66 or older (8)

Q17 What is your gender?
µ   Male (1)
µ   Female (2)
µ   Transgender or trans (3)
µ   Other (4) _____

Q18 Please specify your ethnicity:
µ   Caucasian (1)
µ   African American (2)
µ   Hispanic (3)
µ   Asian/Pacific Islander (4)
µ   Mixed Race (5)
µ   Other (6)

Q19 What is the highest degree you have completed in any field?
µ   Bachelor's degree (1)
µ   Master's degree (2)
µ   Professional degree (JD, Ed.D) (3)
µ   Research degree (Ph.D) (4)

Q20 Do you have a degree specifically in the field of education?
µ   Yes (1)
µ   No (2)

Q21 Prior to the current school year, how many years of teaching experience do you have?

µ   0 (this is my first year teaching) (1)

µ   1 (2)

µ   2 (3)

µ   3 (4)

µ   4 (5)

µ   5 (6)

µ   6 (7)

µ   7 (9)

µ   8 (10)

µ   9 (11)

µ   10 (12)

µ   11 or more (8)

Q22 What subject(s) do you currently teach? Please select all that apply:

θ   English/Language Arts/Reading (1)

θ   Lower Elementary (K-2) (7)

θ   Upper Elementary (3-5) (8)

θ   History (2)

θ   Math (3)

θ   Foreign Language (4)

θ   ESL (5)

θ   Science (6)

θ   Career/Technical (10)

θ   Art (11)

θ   Music (12)

θ   Special Education (13)

θ   Other (14)

Q23 Which of the options below best matches your career plans for next year?

µ   I plan to teach in my current building (1)

µ   I plan to teach but move schools (4)

µ   I plan to leave the profession and pursue a different career (5)

µ   I am unsure at this time (6)

If I plan to teach but move sc... Is Selected, Then Skip To What is your primary reason for wanti...If I plan to teach but move sc... Is Selected, Then Skip To What is your primary reason for wanti...If I plan to leave the profess... Is Selected, Then Skip To What is your primary reason for wanti...If I am unsure at this time Is Selected, Then Skip To If you would like to be entered to wi...

Q24 What is your primary reason for wanting to remain in your current school?
If What is your primary reason... Is Not Empty, Then Skip To If you would like to be entered to wi...

Q25 What is your primary reason for wanting to leave your current school?
If What is your primary reason... Is Not Empty, Then Skip To If you would like to be entered to wi...

Q26 What is your primary reason for wanting to leave teaching?
If What is your primary reason... Is Not Empty, Then Skip To If you would like to be entered to wi...

Q27 If you would like to be entered to win a $50 Visa gift card, please enter your email address below. Your email address will be separated from your previous responses to ensure confidentiality when we analyze and report our data. Thanks again for your time!

Good Afternoon, Mr. XXX,

My name is Rachel Moquin, and I write you today on behalf of the Tennessee Charter School Center and Vanderbilt University. I'm a third-year student in the Ed.D program and am writing to solicit access to your teachers for an upcoming research project.

On behalf of the Tennessee Charter School Center, my team is studying teacher attrition at charter schools in Memphis and Nashville. To date, there have been no comprehensive studies done on the various factors that influence teachers to stay or leave at charter schools in Tennessee. The Center granted us access to all schools, and we recently received survey approval by Vanderbilt's Institutional Review Board. The survey should take ~10 minutes to complete, and all data will be held in strict confidentiality. Once we have enough respondents, we will be able to cut the data in various ways to see the biggest push/pull factors for charter school teachers in Tennessee. Then, we will write up our findings for use by the center. I believe this will ultimately be a valuable human capital resource.

Where you come in: If you are willing to help, please send the message below (or something similar) to your teachers. Thank you for any help you can provide!

Thank you,

Rachel

....

Good Morning Teachers,

I'm writing to invite you to participate in a survey regarding teacher retention for a project at Vanderbilt University's Peabody College in conjunction with the Tennessee Charter School Center. To take the web-based survey, click on https://peabody.az1.qualtrics.com/SE/?SID=SV_5pBeGj1Px1dIpkF

Purpose

The purpose of this survey is to gauge the impact of various factors affecting teacher retention in Tennessee charter schools. By answering these questions, you will provide valuable information about the specific importance of these factors to Tennessee charter school teachers.

Who is Conducting this Survey?

Three graduate students in the department of Leadership, Policy and Organizations at Vanderbilt University's, Peabody College are conducting this survey to fulfill a requirement for their Educational Doctorate.

Will Your Responses be Confidential?

Your responses are protected from disclosure by federal statute (20 U.S.C., §9573). All responses that relate to or describe identifiable characteristics of individuals may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose, unless otherwise compelled by law.

How Will Your Information be Reported?

The information you provide will be combined with the information provided by others in statistical reports. No individually-identifiable data will be included in the statistical reports.

 We hope you will participate in this volunteer study,

Vanderbilt University, Peabody College, Doctoral Research Team

Appendix C: Follow-Up Principal Email

Hello Mr. XXX,

I'm writing to follow up regarding your school's participation in an upcoming study on charter school teacher retention at Vanderbilt University. Please see below for more description and a sample email to your staff. I welcome the chance to answer any questions you might have.

Thank you,

Rachel Moquin

Appendix D: Statistical Tests & Tables

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
Table 13: Descriptives: Local Network, National Network, Standalone						Lower Bound	Upper Bound		
School Conditions	Local Network	36	3.28	0.78	0.13	3.01	3.54	1.00	4.50
	National Network	8	2.60	0.37	0.13	2.30	2.91	2.06	3.33
	Standalone	77	3.66	0.47	0.05	3.56	3.77	2.72	4.44
	Total	121	3.48	0.64	0.06	3.36	3.59	1.00	4.50
Compensation	Local Network	36	3.18	0.69	0.12	2.95	3.41	1.67	5.00
	National Network	8	3.52	0.79	0.28	2.86	4.18	2.00	4.67
	Standalone	73	3.31	0.81	0.09	3.12	3.49	1.00	5.00
	Total	117	3.28	0.77	0.07	3.14	3.42	1.00	5.00
Burnout	Local Network	32	3.47	0.88	0.16	3.15	3.78	1.42	4.79
	National Network	8	2.61	0.55	0.19	2.15	3.06	2.05	3.47
	Standalone	69	3.76	0.72	0.09	3.58	3.93	2.26	5.00
	Total	109	3.59	0.82	0.08	3.43	3.74	1.42	5.00
Instructional Support	Local Network	30	3.37	0.66	0.12	3.13	3.62	2.20	4.47
	National Network	7	2.65	0.88	0.33	1.83	3.46	1.00	3.60
	Standalone	64	3.33	0.64	0.08	3.17	3.49	2.07	4.47
	Total	101	3.29	0.68	0.07	3.16	3.43	1.00	4.47

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
Table 14: Descriptives: School/Network Satisfaction						Lower Bound	Upper Bound		
How satisfied are you with teaching at your current school?	Local Network	32	3.44	1.076	0.19	3.05	3.83	1	5
	National Network	7	2.57	1.272	0.481	1.39	3.75	1	4
	Standalone	67	3.78	1.126	0.138	3.5	4.05	1	5
	Total	106	3.59	1.153	0.112	3.37	3.82	1	5
How satisfied are you with the larger network/CMO with which your school is affiliated?*	Local Network	31	3.39	1.145	0.206	2.97	3.81	1	5
	National Network	7	3	1.528	0.577	1.59	4.41	1	5
	Standalone	39	3.18	0.942	0.151	2.87	3.48	1	5
	Total	77	3.25	1.078	0.123	3	3.49	1	5

*Respondents who teach at standalone schools excluded from this analysis

Table 15: *t*-Test: Elementary, Middle/High

	Elementary			Middle/High			*t*-test	Sig. (2-tailed)	Mean Difference
	N	M	SD	N	M	SD			
Burnout	37	3.3556	0.91828	72	3.7047	0.73798	-2.149	0.034**	-0.34906
School Conditions	43	3.1499	0.73388	78	3.6578	0.49881	-4.513	0.000**	-0.50789
Compensation	42	3.2262	0.89247	75	3.3133	0.69693	-0.585	0.559	-0.08714
Instructional Support	32	3.1958	0.80267	69	3.3401	0.61455	-0.993	0.323	-0.14426

** Significant at the 0.01 level (2-tailed).
* Significant at the 0.05 level (2-tailed).

Table 16: _t_-test: Elementary, Middle/High School

	Elementary			Middle/High School			_t_-test	Sig. (2-tailed)	Mean Difference
	N	M	SD	N	M	SD			
How satisfied are you with teaching at your current school?	34	3.29	1.338	72	3.740	1.035	-1.864	0.065	-0.442
How satisfied are you with the larger network/CMO with which your school is affiliated?	29	3.030	1.149	48	3.380	1.024	-1.35	0.181	-0.341

** Significant at the 0.01 level (2-tailed)
* Significant at the 0.05 level (2-tailed)

Table 17: _t_-Test: Schools that are Less than 3 years old, Schools that are 3+ years old

	Less than 3 years			3+ years			t-test	Sig. (2-tailed)	Mean Difference
	N	M	SD	N	M	SD			
Burnout	17	3.6378	0.82924	92	3.5767	0.81838	0.282	0.778	0.06111
School Conditions	20	3.4028	0.75464	101	3.492	0.61625	-0.569	0.57	-0.08925
Compensation	19	3.1842	1.00292	98	3.301	0.7214	-0.603	0.547	-0.11681
Instructional Support	14	3.4048	0.77502	87	3.2766	0.66562	0.653	0.515	0.12813

** Significant at the 0.01 level (2-tailed).
* Significant at the 0.05 level (2-tailed).

Table 18: _t_-test: Less than 3 years old, 3+ years old

	Less than 3 years old			3+ years old			_t_-test	Sig. (2-tailed)	Mean Difference
	N	M	SD	N	M	SD			
How satisfied are you with teaching at your current school?	15	3.67	1.291	91	3.580	1.136	0.261	0.795	0.084
How satisfied are you with the larger network/CMO with which your school is affiliated?	12	3.170	0.718	65	3.260	1.136	-0.278	0.781	-0.095

** Significant at the 0.01 level (2-tailed)
* Significant at the 0.05 level (2-tailed)

Table 19: _t_-test: More than 5 years experience, Less than 5 years experience

	More than 5 years experience			Less than 5 years experience			_t_-test	Sig. (2-tailed)	Mean Difference
	N	M	SD	N	M	SD			
Burnout	33	3.6077	0.8733	66	3.5694	0.79439	0.219	0.827	0.03828
School Conditions	33	3.5488	0.59085	66	3.431	0.69094	0.838	0.404	0.11785
Compensation	33	3.197	0.87644	66	3.3359	0.73815	-0.828	0.41	-0.13889
Instructional Support	33	3.3758	0.66642	66	3.2525	0.69435	0.843	0.401	0.12323

** Significant at the 0.01 level (2-tailed).
* Significant at the 0.05 level (2-tailed).

Table 20: *t*-test: Less than 5 years teaching experience, 5+ years teaching experience

	Less than 5 years teaching experience			5+ years teaching experience			*t*-test	Sig. (2-tailed)	Mean Difference
	N	M	SD	N	M	SD			
How satisfied are you with teaching at your current school?	33	3.73	1.257	66	3.530	1.099	0.801	0.425	0.197
How satisfied are you with the larger network/CMO with which your school is affiliated?	23	3.260	1.287	47	3.260	0.988	0.02	0.984	0.006

** Significant at the 0.01 level (2-tailed)
* Significant at the 0.05 level (2-tailed)

Table 21: *t*-test: Male, Female

	Male			Female			*t*-test	Sig. (2-tailed)	Mean Difference
	N	M	SD	N	M	SD			
Burnout	25	3.65	0.701	72	3.561	0.864	0.457	0.648	0.08775
School Conditions	25	3.453	0.776	72	3.471	0.619	-0.113	0.91	-0.01735
Compensation	25	3.21	0.970	72	3.317	0.672	-0.627	0.532	-0.11046
Instructional Support	25	3.392	0.668	72	3.251	0.685	0.893	0.374	0.14107

** Significant at the 0.01 level (2-tailed)
* Significant at the 0.05 level (2-tailed)

Table 22: *t*-test: Male, Female

	Male			Female			*t*-test	Sig. (2-tailed)	Mean Difference
	N	M	SD	N	M	SD			
How satisfied are you with teaching at your current school?	25	3.68	0.852	72	3.580	1.242	0.36	0.719	0.097
Which of the options below best matches your career plans for next year?	24	3.210	2.484	72	2.720	2.234	0.897	0.372	0.486

** Significant at the 0.01 level (2-tailed)
* Significant at the 0.05 level (2-tailed)

Table 23: Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Burnout	Caucasian	76	3.6766	0.82963	0.09517	3.487	3.8662	1.42	4.89
	African American	11	3.0574	0.72603	0.21891	2.5697	3.5452	1.84	4
	Hispanic	5	3.6105	0.72605	0.3247	2.709	4.512	2.89	4.68
	Total	92	3.599	0.82997	0.08653	3.4271	3.7709	1.42	4.89
School Conditions	Caucasian	76	3.5482	0.59748	0.06854	3.4117	3.6848	2.06	4.44
	African American	11	2.8838	0.87892	0.265	2.2934	3.4743	1	4
	Hispanic	5	3.7556	0.44026	0.19689	3.2089	4.3022	3.33	4.33
	Total	92	3.4801	0.66231	0.06905	3.3429	3.6172	1	4.44
Compensation	Caucasian	76	3.4013	0.68377	0.07843	3.2451	3.5576	1.67	5
	African American	11	3	1.08012	0.32567	2.2744	3.7256	1.33	5
	Hispanic	5	3	0.61237	0.27386	2.2396	3.7604	2.17	3.67
	Total	92	3.3315	0.74392	0.07756	3.1775	3.4856	1.33	5
Instructional Support	Caucasian	76	3.3237	0.68825	0.07895	3.1664	3.481	1	4.47
	African American	11	3.4727	0.72077	0.21732	2.9885	3.9569	2.47	4.47
	Hispanic	5	2.7867	0.36938	0.16519	2.328	3.2453	2.47	3.4
	Total	92	3.3123	0.68694	0.07162	3.1701	3.4546	1	4.47

Table 24: Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
How satisfied are you with teaching at your current school?	Caucasian	76	3.76	1.118	0.128	3.51	4.02	1	5
	African American	11	3.09	1.044	0.315	2.39	3.79	1	4
	Hispanic	5	3.2	1.304	0.583	1.58	4.82	1	4
	Total	92	3.65	1.133	0.118	3.42	3.89	1	5
Which of the options below best matches your career plans for next year?	Caucasian	76	2.38	2.104	0.241	1.9	2.86	1	6
	African American	10	4.8	2.098	0.663	3.3	6.3	1	6
	Hispanic	5	4	2.739	1.225	0.6	7.4	1	6
	Total	91	2.74	2.265	0.237	2.26	3.21	1	6

Table 25: Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Burnout	Bachelor's degree	33	3.7273	0.74472	0.12964	3.4632	3.9913	2.05	4.79
	Master's degree	55	3.5206	0.85826	0.11573	3.2886	3.7526	1.42	4.84
	Professional degree (JD, Ed.D)	4	3.6184	1.1943	0.59715	1.718	5.5188	2.47	4.89
	Total	92	3.599	0.82997	0.08653	3.4271	3.7709	1.42	4.89
School Conditions	Bachelor's degree	33	3.6431	0.57802	0.10062	3.4381	3.8481	2.39	4.44
	Master's degree	55	3.4192	0.62943	0.08487	3.249	3.5894	1.78	4.44
	Professional degree (JD, Ed.D)	4	2.9722	1.38072	0.69036	0.7752	5.1693	1	4.06
	Total	92	3.4801	0.66231	0.06905	3.3429	3.6172	1	4.44
Compensation	Bachelor's degree	33	3.3384	0.65681	0.11434	3.1055	3.5713	1.33	5
	Master's degree	55	3.3091	0.77739	0.10482	3.0989	3.5192	1.67	4.83
	Professional degree (JD, Ed.D)	4	3.5833	1.10135	0.55067	1.8308	5.3358	2.33	5
	Total	92	3.3315	0.74392	0.07756	3.1775	3.4856	1.33	5
Instructional Support	Bachelor's degree	33	3.2424	0.67532	0.11756	3.003	3.4819	2.07	4.47
	Master's degree	55	3.3236	0.68282	0.09207	3.139	3.5082	1	4.47
	Professional degree (JD, Ed.D)	4	3.7333	0.87433	0.43716	2.3421	5.1246	2.47	4.47
	Total	92	3.3123	0.68694	0.07162	3.1701	3.4546	1	4.47

Table 26: Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
How satisfied are you with teaching at your current school?	Bachelor's degree	33	3.64	1.113	0.194	3.24	4.03	1	5
	Master's degree	55	3.62	1.178	0.159	3.3	3.94	1	5
	Professional degree (JD, Ed.D)	4	4.25	0.5	0.25	3.45	5.05	4	5
	Total	92	3.65	1.133	0.118	3.42	3.89	1	5
Which of the options below best matches your career plans for next year?	Caucasian	33	2.27	2.14	0.373	1.51	3.03	1	6
	Master's degree	55	3.02	2.305	0.311	2.39	3.64	1	6
	Professional degree (JD, Ed.D)	3	2.67	2.887	1.667	-4.5	9.84	1	6
	Total	91	2.74	2.265	0.237	2.26	3.21	1	6

Table 27: Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean — Lower Bound	95% Confidence Interval for Mean — Upper Bound	Minimum	Maximum
Burnout	18-25	38	3.3892	0.8685	0.14089	3.1037	3.6747	1.42	4.74
	26-35	47	3.7436	0.67888	0.09902	3.5442	3.9429	2.05	4.68
	36+	14	3.5639	1.02669	0.27439	2.9711	4.1567	1.84	4.89
	Total	99	3.5821	0.81726	0.08214	3.4191	3.7451	1.42	4.89
School Conditions	18-25	38	3.4371	0.7201	0.11682	3.2004	3.6738	2.06	4.44
	26-35	47	3.5225	0.60997	0.08897	3.3434	3.7016	1	4.44
	36+	14	3.3849	0.67567	0.18058	2.9948	3.775	1.78	4.39
	Total	99	3.4703	0.6586	0.06619	3.3389	3.6016	1	4.44
Compensation	18-25	38	3.3684	0.73741	0.11962	3.126	3.6108	1.67	5
	26-35	47	3.2943	0.79111	0.1154	3.062	3.5266	1.33	5
	36+	14	3.0595	0.90016	0.24058	2.5398	3.5793	1	4
	Total	99	3.2896	0.7852	0.07892	3.133	3.4462	1	5
Instructional Support	18-25	38	3.2526	0.73524	0.11927	3.011	3.4943	1	4.4
	26-35	47	3.2851	0.61757	0.09008	3.1038	3.4664	2.07	4.47
	36+	14	3.4333	0.78436	0.20963	2.9805	3.8862	2.2	4.47
	Total	99	3.2936	0.68425	0.06877	3.1571	3.4301	1	4.47

Table 28: Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean — Lower Bound	95% Confidence Interval for Mean — Upper Bound	Minimum	Maximum
How satisfied are you with teaching at your current school?	18-25	38	3.47	1.202	0.195	3.08	3.87	1	5
	26-35	47	3.68	1.002	0.146	3.39	3.98	1	5
	36+	14	3.64	1.499	0.401	2.78	4.51	1	5
	Total	99	3.6	1.151	0.116	3.37	3.83	1	5
Which of the options below best matches your career plans for next year?	18-25	38	2.87	2.28	0.37	2.12	3.62	1	6
	26-35	46	2.96	2.394	0.353	2.25	3.67	1	6
	36+	14	2.36	1.985	0.53	1.21	3.5	1	6
	Total	98	2.84	2.283	0.231	2.38	3.29	1	6