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Will They Stay or Will They Go? Analysis of the 2019 DOE Working Conditions Survey

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WILL THEY STAY OR WILL THEY GO? ANALYSIS OF THE 2019 VDOE WORKING CONDITIONS SURVEY

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*A report by the Metropolitan Educational Research Consortium (MERC)
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ABOUT THIS REPORT

This report is part of the MERC Teacher Retention study. This study was designed to identify patterns of teacher retention in the MERC region and to determine the school and system-level factors driving them. The study also provides an overview of state and regional policies and programs relevant to teacher retention, and includes evaluations of existing policies and initiatives to determine efficacy and cost benefit.

Teacher shortages continue to be a problem in the United States. While a range of policy solutions have attempted to stem the loss of teachers, at the base of many of these efforts is the concept of teacher working conditions, that is the workplace elements related to a teacher's ability to do their job. Working conditions have been associated with job satisfaction and retention. This report presents the findings from an analysis of the 2019 Virginia Department of Education Working Conditions Survey. The analysis considered the various factors that influence teacher working conditions and whether these working conditions predict a teacher's intent to stay or leave their current school.

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CONTENTS

INTRODUCTION	5
Teacher Working Conditions and Retention	5
VDOE Working Conditions Survey	6
ABOUT THE SAMPLE	9
RESEARCH QUESTIONS	10
FINDINGS	11
Stayers and Leavers (The Dependent Variable)	11
Working Conditions (The Independent Variables)	15
Predictors of Staying	21
CONCLUSIONS / SIGNIFICANCE	25
Summary of Findings	25
Implications and Recommendations	27
REFERENCES	31
APPENDIX A: SURVEY SCALES BY DIVISION	35
APPENDIX B: METHODOLOGICAL STATEMENT	43

INTRODUCTION

Teacher Working Conditions and Retention

Research shows that high quality teachers are the number one factor determining student achievement,¹ and that experience is a key dimension of teacher quality. For example, students have been shown to make three to four months more progress in reading during a school year when taught by educators with at least five years of experience.² Unfortunately, nearly half of all United States (U.S.) public school teachers leave the classroom before their fifth year.³ In addition to the effects on student achievement, teacher attrition is expensive to school systems.⁴ Each teacher a school does not retain is estimated to cost the school system \$15,000 to \$20,000.⁵ There is a breath of research that explores both the direct and indirect effects of teacher turnover as well as the reasons teachers choose to stay or leave their schools or the profession as a whole.

Much of the research on teacher retention has focused on the impact of teacher working conditions, that is the elements that relate to a teacher's ability to do their job.⁶ In a recent review of research on working conditions, Merrill identified two broad categories of working conditions: those that relate to the people with whom a teacher interacts (e.g., leaders, colleagues, students, parents), and those that capture qualities of the work (e.g., autonomy, demands on time).⁷ In both categories, the relationship between teacher working conditions and retention are well established. Grissom offered one of the earliest conceptual frameworks to understand this relationship. In Grissom's framework, working conditions are a set of factors that teachers take into account in a cost-benefit calculation around the decision to stay or leave. For example, research has shown that a teacher's perception of leadership influences their retention decision.⁸ Lack of administrative support has been identified as having the highest impact on teacher turnover percentages; teachers are twice as likely to leave if they have differing views or do not feel supported by their administration.⁹ Collegiality among teachers, particularly new teachers, has also been associated with teachers' decisions to stay in their school.¹⁰ Even when there is a higher workload, higher social support was a key factor to teachers staying at their school.¹¹ Several studies describe collegiality as the professional fit that teachers have with their schools. Pogodzinski and colleagues found that new teachers are more likely to stay at their

¹ Wiener (2007)

² Milner (2012)

³ Ingersoll, Merrill, & May (2014)

⁴ Cooper & Alvarado (2006)

⁵ Darling-Hammond (2010)

⁶ Merrill (2021)

⁷ Merrill (2021)

⁸ Darling-Hammond (2010)

⁹ Carver-Thomas & Darling-Hammond (2017)

¹⁰ Shernoff et al. (2011)

¹¹ Pomaki et al. (2010)

school when the school has a climate that is positive and collegial, and there is a sense among professionals of collective responsibility.¹²

VDOE Working Condition Survey

In the spring of 2019, the Virginia Department of Education (VDOE), in partnership with the University of Virginia, administered a survey of working conditions to any teacher or school staff holding a license from the VDOE. School divisions selected a three week window between January and March 2019 to administer the survey. VDOE required all schools to participate, but individual teacher participation was voluntary. However, schools were encouraged to have at least 80% of teachers participate. As part of a grant from the Institute for Education Sciences (IES), this survey will be administered bi-annually with the second administration having occurred in the Spring of 2021.

Informed by the literature on teacher working conditions, as well as VDOE's priorities, the survey operationalized working conditions with items that crossed four broad constructs: (1) professionalism; (2) teaching, instruction, and student services; (3) school and community supports; and (4) safety.¹³ Each of the four main constructs was measured using a subset of scales, each composed of a set of items. Table 1 shares the survey subscales, and provides example items for each subscale. The survey also had one item that asked about the teacher's future professional plans. Teachers indicated whether they planned to remain teaching at their school, to move to another school, or to leave the profession.

In this report, we use the data from the 2019 Working Conditions Survey to examine potential correlates of teacher retention. This report is focused on the results from the seven MERC school divisions, and, where possible, we compare MERC divisions to the Commonwealth. Specifically, the goal of the research was (1) to learn about the demographics of retained teachers, (2) to understand teachers' experiences of working conditions within their schools, and (3) to predict teachers intentions to stay in their school building based on their perception of working conditions.

¹² Pogodzinski and colleagues (2013)

¹³ Miller (2020)

Table 1. VDOE Working Conditions Survey

Construct	Scales	# of items	Sample items
Professionalism	Teacher leadership	4	<ul style="list-style-type: none"> • Teachers are trusted to make sound professional decisions about instruction. • Teachers engage in collaborative problem solving in this school. • Teachers are effective leaders in this school.
	Teacher autonomy	6	<ul style="list-style-type: none"> • I control how I use my scheduled class time. • Current policies convey confidence in my ability to do well at my job. • My role as an educator is respected under current policies.
	Staff collegiality	5	<ul style="list-style-type: none"> • I feel respected by teachers and other adults at this school. • Teachers and other adults at this school support one another to meet the needs of all students. • Teachers and other adults at this school collaborate to make this school run effectively.
Teaching, Instruction and Student Support	Instructional practices	5	<ul style="list-style-type: none"> • Teachers and other adults at this school want students to think about different ways to solve problems. • Teachers and other adults at this school encourage students to share their ideas about what they are studying in class. • Teachers and other adults at this school often connect what students are learning to life outside the classroom.
	Academic environment	6	<ul style="list-style-type: none"> • Teachers and other adults at this school provide students the support they need to succeed. • Students come to school ready to learn. • Students put forth the effort required to learn the material.
	Instructional environment	4	<ul style="list-style-type: none"> • The physical environment of my classroom supports my teaching and my students' learning. • My school provides me with sufficient access to appropriate instructional materials. • I have the support I need to incorporate technology into my instruction.
School and Community Supports	School leadership	9	<ul style="list-style-type: none"> • I feel respected by this school's administrators. • This school's administrators support teachers' efforts to maintain discipline in the classrooms. • Teachers and other staff have a shared vision for this school.
	Teacher evaluation	3	<ul style="list-style-type: none"> • Teacher performance is assessed objectively. • Teachers receive feedback that can help them improve their teaching. • The procedures for teacher evaluation are consistent.

	Professional development	5	<ul style="list-style-type: none"> Professional development is differentiated to meet the individual needs of teachers. Follow-up is provided after professional development activities to give teachers additional support. Professional development enhances teachers' abilities to improve student learning.
	Demands on teachers' time	4	<ul style="list-style-type: none"> Class sizes are reasonable such that teachers have the time available to meet the needs of all students. Teachers have time available to collaborate with colleagues. The non-instructional time provided for teachers in my school is sufficient.
	Managing student behavior	8	<ul style="list-style-type: none"> Students know there are consequences for breaking school rules. There are supports to help a student who consistently misbehaves develop positive behavior. This school's rules for student behavior are effective.
	New teacher support	4	<ul style="list-style-type: none"> Formally assigned a mentor Release time to observe other teachers Formal time to meet with mentor during school hours
	Relationships with parents/guardians	5	<ul style="list-style-type: none"> Teachers and other adults provide useful information to parents and guardians to support their children's learning at home. This school maintains clear, two-way communication with parents and guardians. Parents and guardians help their children achieve the educational goals of the school, both academic and behavioral.
Safety	Concerns about safety	3	<ul style="list-style-type: none"> I am treated with respect by students at this school. I feel safe at this school. I feel there is adequate security in this school.
	Bullying	5	<ul style="list-style-type: none"> Bullying is a problem at this school. Students at this school are bullied about their race or ethnicity. Students at this school are bullied about their disability.

ABOUT THE SAMPLE

Statewide, 1,678 (93%) schools participated in the teacher survey. In 79 school divisions (60%), all schools participated. In only 17 divisions (13%), less than 75% of schools participated.

Overall, there were 54,207 responses from teachers leading to a 67% response rate across participating schools. Over a third (37%) of the participating schools reached the 80% teacher response rate that VDOE had requested. Teacher response rates varied across divisions, with 15 divisions hitting a response rate of at least 80% and 31 divisions having a response rate below 50%. Table 2 below shows the demographics and characteristics of the teachers that completed the survey both statewide and in the 7 MERC school divisions.

Table 2. Profile of Survey Respondents

	Statewide	MERC Divisions
Gender		
Female	82%	82%
Male	18%	18%
Race/Ethnicity*		
American Indian or Alaska Native	1%	1%
Asian	2%	1%
Black or African American	9%	14%
Native Hawaiian or Pacific Islander	0%	0%
White	84%	80%
Other Race	13%	4%
Hipanic/Latinx	4%	2%
Subjects Taught		
Bilingual/English language learners/English as a Second Language	11%	10%
Career and technical education	5%	5%
Early childhood education	7%	6%
Elementary education	43%	45%

English Language Arts	39%	41%
Fine Arts (e.g., art, dance, music, theatre)	6%	6%
Foreign language	3%	3%
Health/physical education	6%	4%
History/social studies/civics/geography	31%	34%
Mathematics	38%	41%
Science	33%	35%
Special education	23%	24%
Other	5%	12%

Years of Experience		
1-3 years	36%	37%
4-10 years	33%	32%
11-20 years	23%	24%
More than 20 years	9%	7%

*NOTE: For race/ethnicity and subjects taught, the percentages add up to more than 100%. These were “select all that apply” questions on the survey.

RESEARCH QUESTIONS

Using the 2019 VDOE Working Conditions survey, our research team was interested in understanding patterns and predictors of teacher retention. Specifically, the following research questions guided the inquiry:

1. What percentage of teacher-respondents indicated an intention to stay in their school building, and do those percentages vary by teacher characteristics?
2. How do teachers report on their working conditions, and do those reports vary by teacher characteristics?
3. How do teacher working conditions predict teachers’ intentions to stay in their school building?

FINDINGS

This section reports the findings from our analysis. The first subsection includes descriptive statistics on the main dependent variable used in the analysis. That dependent variable is teacher responses to a question about their intention to leave or stay in their current position. The second section includes mean scores on the scales used in the survey (see Table 4). These mean scores serve as the main independent variable for the data modeling that is reported in the third subsection. That third subsection includes the results of regression analyses where the mean scores on the scales are used to predict teacher responses to the question about staying or leaving.

Stayers and Leavers (The Dependent Variable)

Towards the end of the survey, teachers were asked the following question:

Which of the following best describes your immediate professional plans?

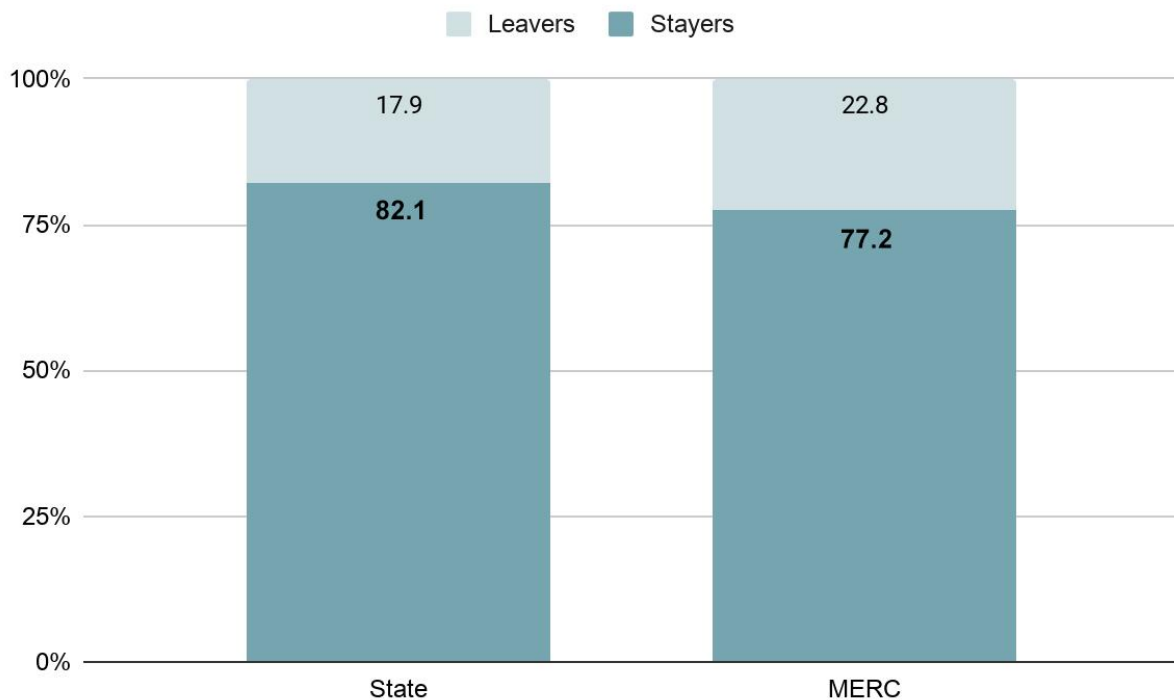
- A. *Continue teaching at my current school*
- B. *Continue teaching in this division but leave this school*
- C. *Continue teaching in this state but leave this division*
- D. *Continue teaching in a state other than Virginia*
- E. *Continue working in education but pursue a non-teaching position*
- F. *Leave education to retire*
- G. *Leave education to work in a non-education field*
- H. *Leave education for other reasons*

For the purposes of this analysis, any teacher who chose response A was labeled as a “stayer.” Any teacher who selected responses B through H were labeled as a “leaver.” Additional and future analyses might choose to separate out response B through D and code those teachers as “movers,” (i.e. they are staying in teaching, but moving to another school) but for this analysis, we chose to simply dichotomize the responses. We did so for several reasons. First, analytically, particularly for complex data modeling, interpreting the results of analyses where the dependent variable is dichotomous is much simpler than where the dependent variable is a multi-category nominal-level variable. Second, much of the data collected about teacher working conditions is school building-level data. And, research indicates that beyond individual teacher characteristics, within-school factors are the strongest correlates of teacher retention decisions. Additionally, from the perspective of a school building administrator, the challenge is when teachers leave (or newly arrive in) a building. Moving to another school within the same district might be an easier administrative burden for the district, but it still poses challenges to the building-level leader on either end of the transaction. Teachers moving from one school building to another also impacts the schools’ professional culture, and it impacts students. For a teacher to follow through on an indication in the survey that they intend to do anything but

stay within their current school would trigger a series of administrative and school climate issues. Therefore, for these sorts of policy considerations, we are simply interested in whether or not a teacher indicated an intent to stay in their current school.

Figure 1 shows the percentage of teachers in MERC divisions who indicated their intention to stay in their current school (77.8%) as compared to teachers across Virginia (82.1%). The difference is statistically significant ($t=-8.198$, $p < .000$).

Figure 1. *Leavers and Stayers*



Figures 2 through 5 report on teachers in MERC divisions only. They show the percentages of stayers and leavers in MERC divisions disaggregated by division, race/ethnicity, school level, and years in their current school. There are no significant differences by sex. Figure 2 does not name the MERC school divisions as it is intended only to show that there are considerable differences across divisions.

Figures 2 through 5 show that:

- There is significant variation across the divisions in the percentage of teachers indicating an intent to stay in their current school. The range is from 62.5% to 88.9%.
- Black or African-American teachers are less likely to indicate an intent to stay (70.6%) than any other group.
- Middle school teachers are slightly less likely to indicate an intent to stay (75.9%) than any other group.

- Teachers who have been in their current school for more than 20 years are most likely to indicate an intent to stay (83.4%).
- Teachers who have been in their current school 4-10 years are less likely to indicate an intent to stay (75.8%) than teachers who have been in their current school for 11-20 years (78.8%).

Figure 2. Stayers and Leavers, by School Division

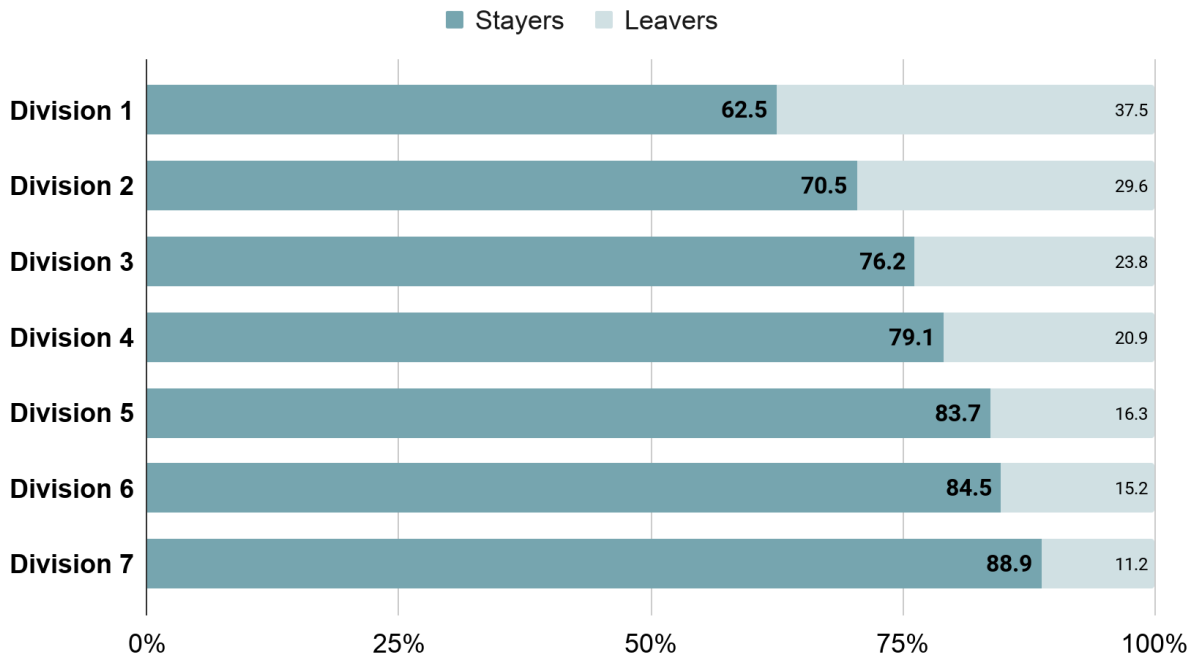


Figure 3. MERC Divisions: Stayers and Leavers, by Race

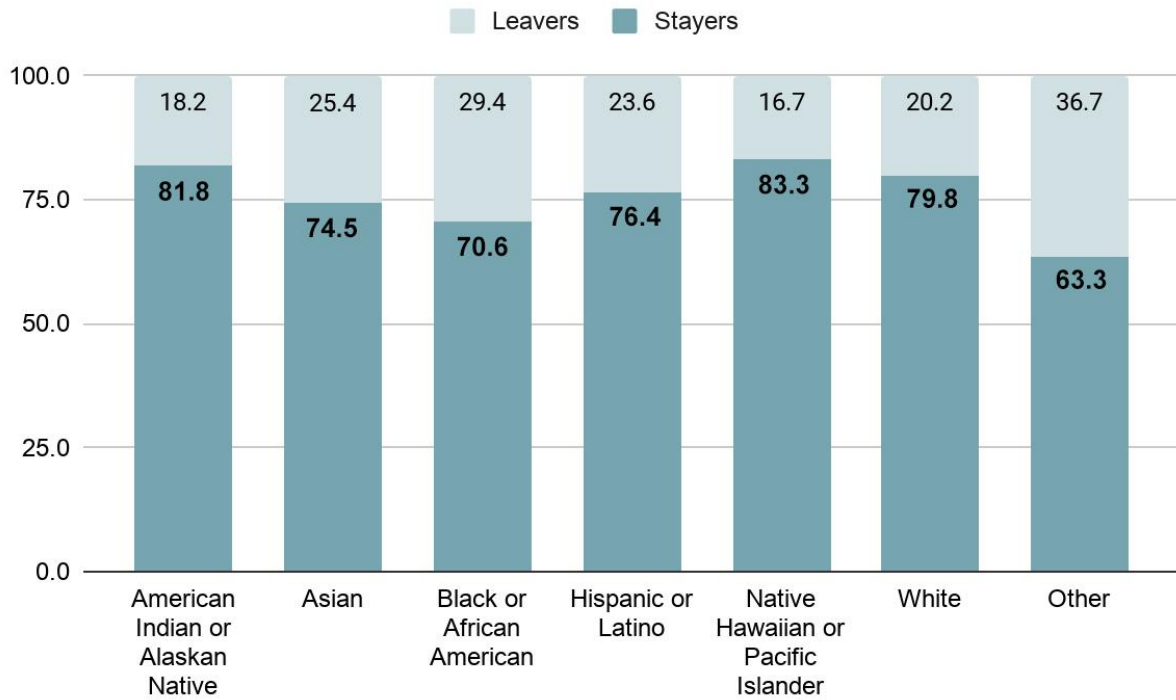


Figure 4. MERC Divisions: Stayers and Leavers, by School Level

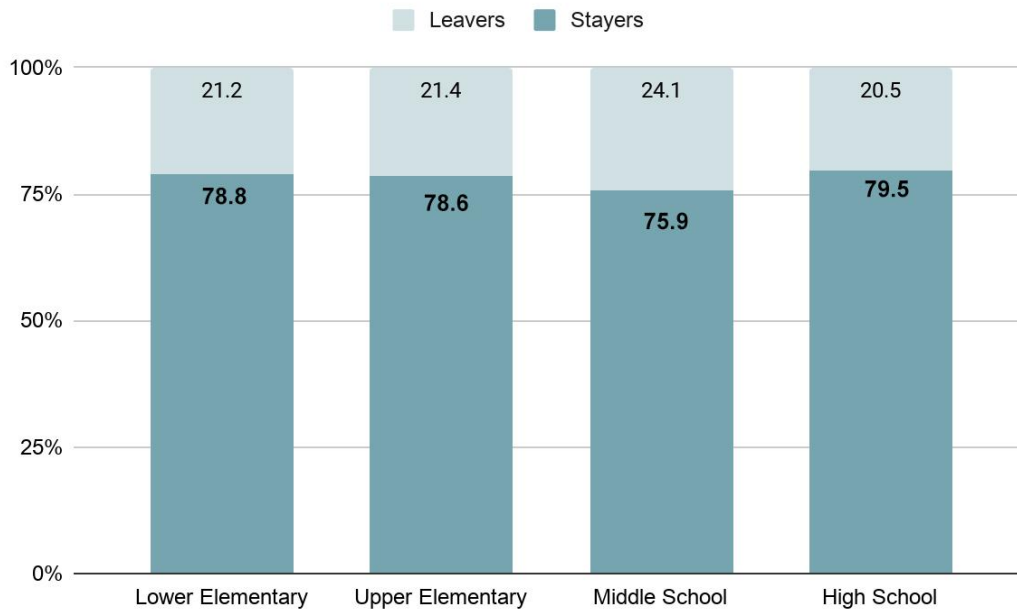
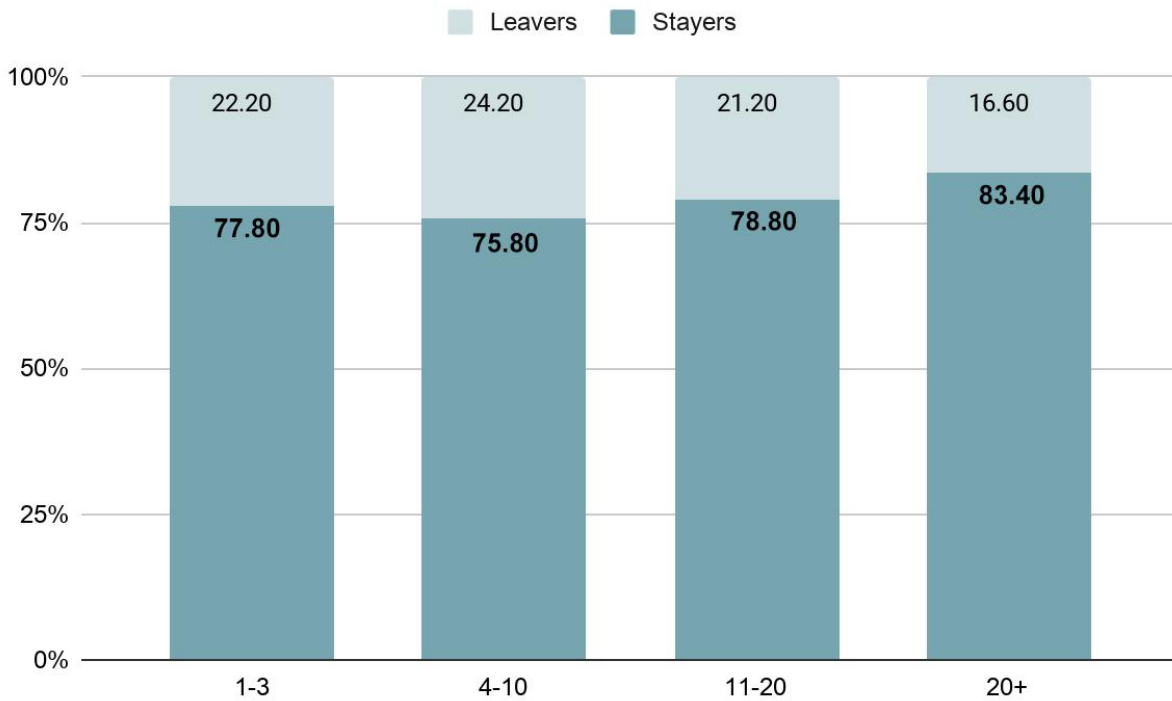


Figure 5. MERC Divisions: Stayers and Leavers, by Years Worked at Current School



Working Conditions (The Independent Variables)

Per the discussion of the survey above, the main part of the 2019 VDOE Working Conditions Survey purported to measure four constructs (professionalism; teaching, instruction, and student support; school and community supports; and safety) that collectively define teacher working conditions. Those four constructs were further operationalized into 11 scales, each of which included varying numbers of items (see Table 1 above). In Table 3 below, we report on the results of a confirmatory factor analysis of those scales.

Confirmatory factor analysis is a statistical technique that allows us to determine if a group of items tend to cluster together; that is, participants who respond one way to a given item in the cluster are more likely to respond similarly to each other on the other items in the cluster. The analysis generates a statistic (alpha) that ranges from 0 to 1. The closer it is to 1, the more reliable that scale is. Generally, in educational research, an alpha of .6 or higher is considered a strong indicator of reliability. All of the scales on the survey showed strong reliability.

All of the scale items were measured using a 6-point Likert scale from “strongly disagree” (scored as 1) to “strongly agree” (scored as 6). For each scale, a mean score across all of the items was computed. Therefore, scores on the scales could range from 1 (the highest possible disagreement) to 6 (the highest possible agreement). In Figures 6-10 below, for all

four of the constructs, we show the mean scores on all of the scales for MERC teachers and the statewide mean.

Figures 6-10 show that:

- For every scale, MERC teachers scored lower than teachers across Virginia. Those differences are all statistically significant.
- The scale with the highest scores, across MERC divisions and Virginia, is *staff collegiality*. In other words, of all of the working conditions scales, teachers are most satisfied with collegiality.
- The scale with the lowest scores, across MERC divisions and Virginia, is *demands on teachers' time*. In other words, of all of the working conditions scales, teachers are most dissatisfied with demands on their time.

The biggest gaps between the state and the MERC divisions are in *demands on teachers' time* and *professional development*. Thus, teachers in MERC divisions report more demands on their time and less focus on professional development.

Table 3. Validity/Reliability

Construct	Scales	Reliability (alpha)
Professionalism	Teacher leadership	0.84
	Teacher autonomy	0.88
	Staff collegiality	0.92
Teaching, Instruction and Student Support	Instructional practices	0.90
	Academic environment	0.86
	Instructional environment	0.78
School and Community Supports	School leadership	0.95
	Teacher evaluation	0.90
	Professional development	0.91
	Demands on teachers' time	0.80
	Managing student behavior	0.92
	New teacher support	0.72
	Relationships with parents/guardians	0.86
Safety	Concerns about safety	0.81
	Bullying	0.91

Figure 6. Professionalism Scales

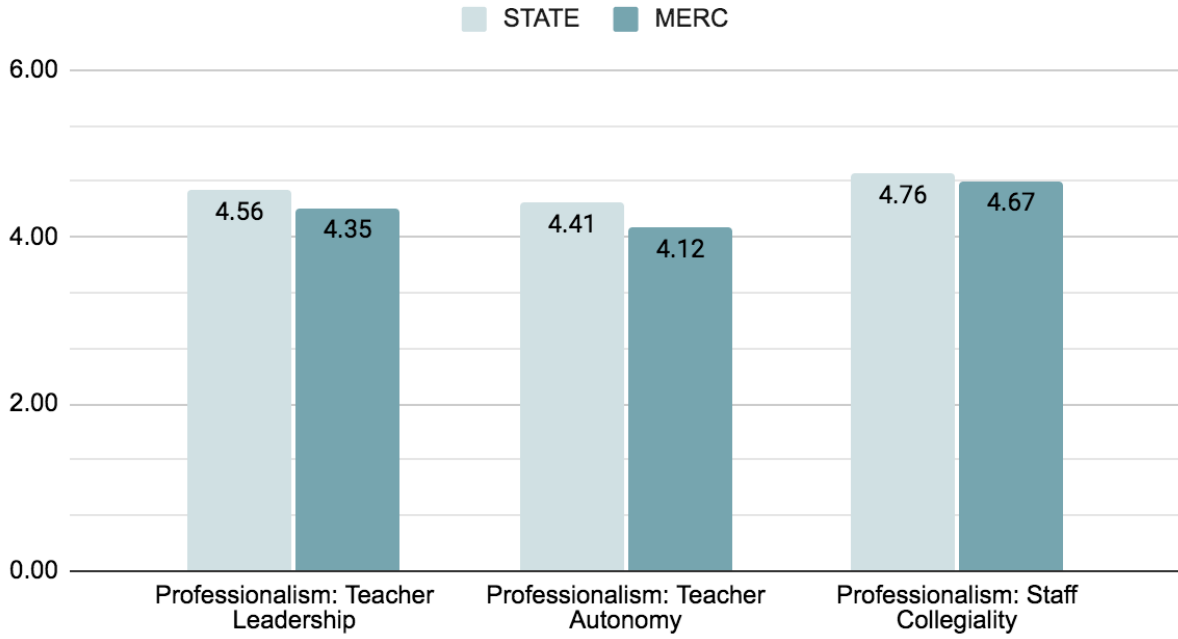


Figure 7. School and Community Supports Scales 1

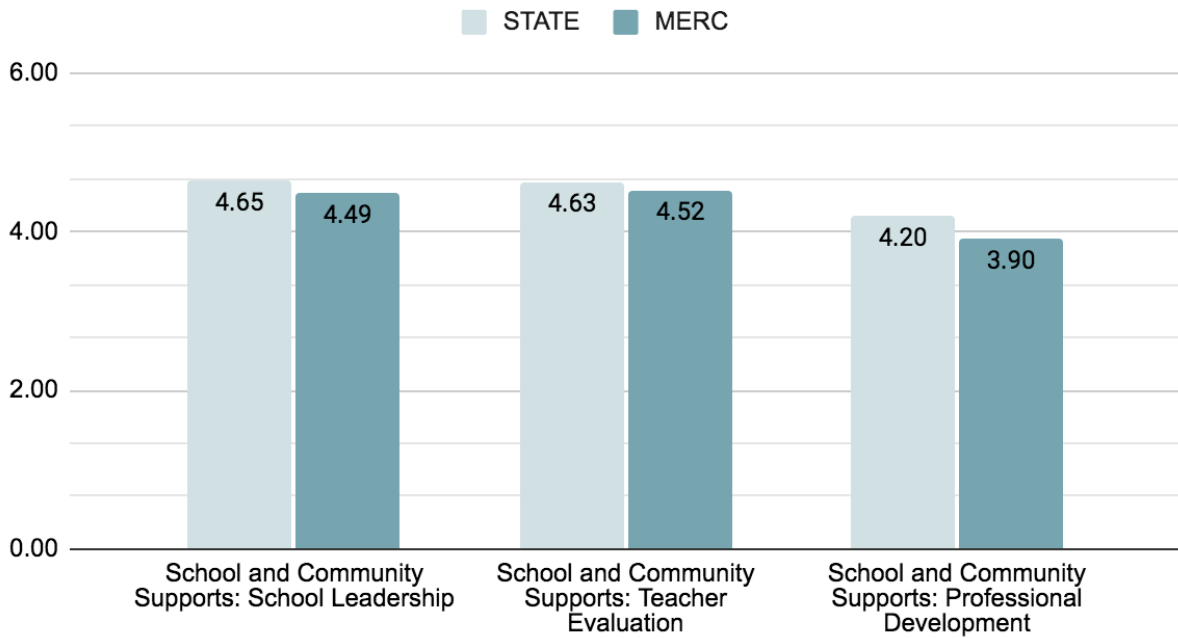


Figure 8. School and Community Supports Scales 2

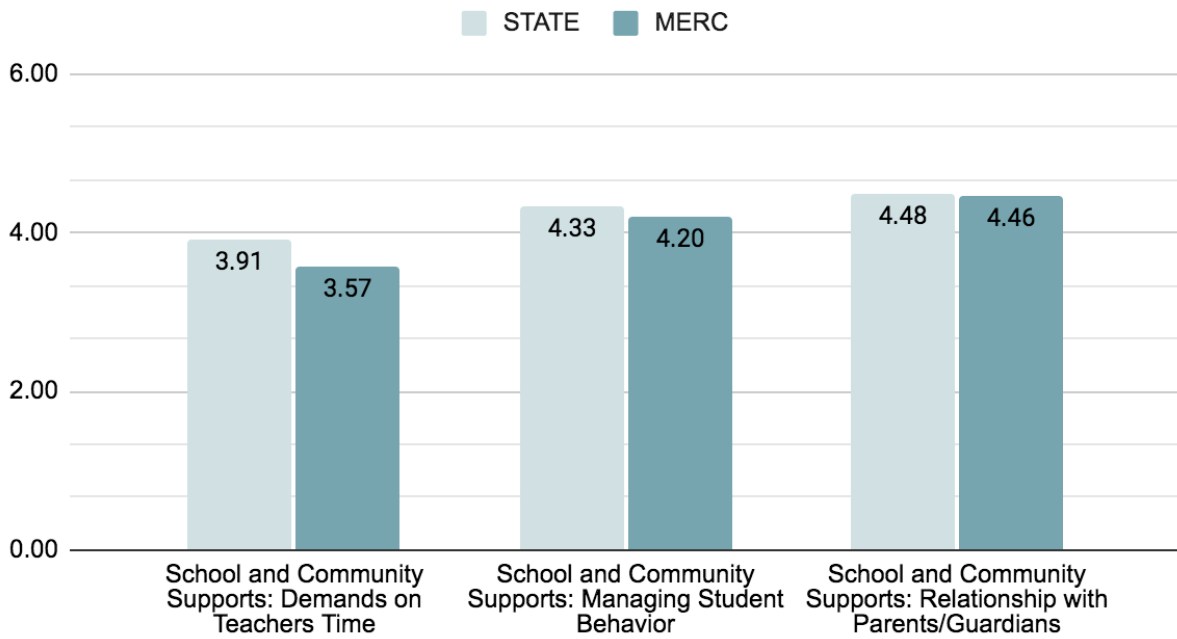


Figure 9. Teaching, Instruction, and Student Support

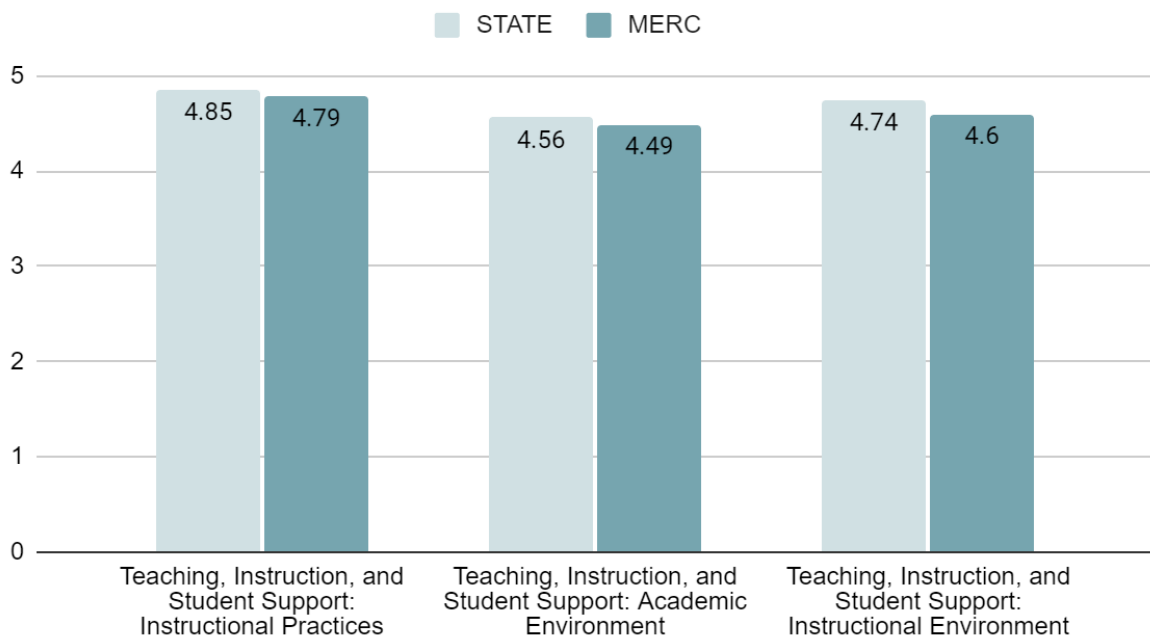
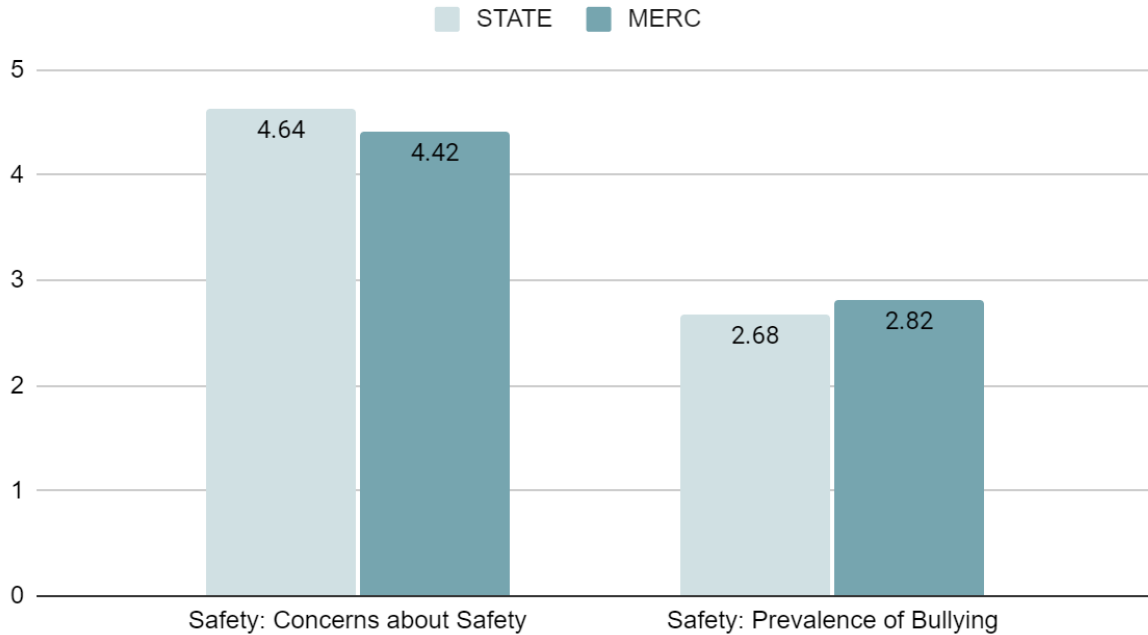


Figure 10. Safety



***NOTE: “Prevalence of Bullying” is reverse valenced. That is, higher scores represent higher perceptions of prevalence of bullying, and vice versa.**

Table 4 below presents the scale means and standard deviations, just within the MERC divisions, to give a sense of how varied teacher responses tended to be around the mean. Demands on teachers’ time, for example, has the lowest mean and also the largest SD. Thus, teachers record this as a particularly problematic working condition, but their responses to those questions vary the most of any of the scales. In other words, on average, teachers struggle the most with demands on their time, but how one teacher responded to those items could vary significantly from how another teacher responds, more so than for any other scale. In Appendix A, including Table 6, we show the mean scores for all of the scales disaggregated by school division. The scores vary across divisions and they tend to do so consistently. In other words, there are fairly consistent division-level differences in how teachers reported their working conditions.

Table 4. Scale Means and Standard Deviations for MERC School Divisions

Construct	Scales	Mean	Standard Deviation
Professionalism	Teacher leadership	4.35	1.05
	Teacher autonomy	4.12	1.09
	Staff collegiality	4.67	0.98
Teaching, Instruction and Student Support	Instructional practices	4.79	0.79
	Academic environment	4.49	0.82
	Instructional environment	4.60	0.99
School and Community Supports	School leadership	4.49	1.16
	Teacher evaluation	4.52	1.15
	Professional development	3.90	1.14
	Demands on teachers' time	3.57	1.17
	Managing student behavior	4.20	1.05
	Relationships with parents/guardians	4.46	0.90
Safety	Concerns about safety	4.42	1.14
	Bullying	2.82	1.08

Predictors of Staying

For this part of the analysis, we bring the dependent variable and the independent variables reported above together via data modeling. Specifically, we ran an ordinary least squares (OLS) regression analysis with staying/leaving as the dependent variable (coded as 1=staying and 0=leaving) and all of the scales from the VDOE working conditions survey as the independent variables. This analytic approach allows us to see which of the scales are most predictive of a teacher indicating that they intend to stay at their current school.

We conducted the regression analysis for the whole Commonwealth of Virginia and then just for the MERC divisions, and in both cases, we ran two models. In model 1, we included only the scales from the survey. In model 2, we include a few teacher demographic

variables as predictors. Specifically, we looked at the effect of being male, being African-American, and of being Hispanic.

Statewide, the data modeling yielded an adjusted r-squared of .139. Thus, model 1 (subscales only) accounts for 14.5% of the variance in staying/leaving. That is, just by knowing a teacher's scores on the 11 scales, we can account for almost 15% of the variance and make a slightly better prediction of whether or not they will indicate an intent to stay in their current school. Model 2, as a whole, is statistically significant ($F=516.71$, $p < .000$). Owing in large part to the large sample size, most of the scales are statistically significant predictors of intent to stay in school. The only independent variables that are not statistically significant are teacher leadership, demands on teachers' time, teachers' relationships with parents/guardians, and prevalence of bullying. The strongest predictor is school leadership ($\beta = .055$). In other words, keeping all other predictors constant, an average increase of one full point on the school leadership scale improves the probability of indicating an intent to stay in the current school by ~6%.

Next, we ran the same models for just the teachers in the MERC divisions. Here, model 2 was also statistically significant ($F=69.15$, $p < .000$), and the model accounts for 17% of the variance in the dependent variable. Thus, as a whole, the model is slightly more predictive in the MERC divisions than for all of Virginia. Notably, compared to the model of statewide data, many fewer scales are significantly related to staying in the current school. Figure 11 below shows the standardized coefficients for all of the independent variables in model 2. We use standardized coefficients here since they are better for comparison purposes (i.e. they are all on the same scale). The independent variables in blue are positively related to a teacher indicating their intent to stay in their current school, and those in red are negatively related. Also, the independent variables in faded colors are not statistically significant predictors.

The unstandardized coefficients for the most predictive independent variables, school leadership and teacher autonomy, are .067 and .053 respectively. Thus, again, if we could increase, on average, the teachers' mean score on the responses to the questions on those scales by one point, we could improve the chances that they would indicate an intent to stay in their current school by 7% and 5% respectively.

On the other end of the spectrum, we see that Black teachers are significantly less likely to indicate an intention to stay in their current school.

The other two scales with negative coefficients are a bit harder to interpret. Their effect sizes (i.e. contribution to the model) are small. But, the negative coefficient is inconsistent with the direction of the relationship between the independent variable and the dependent variable when conducting a simple bivariate correlation. For instance, when simply looking at the relationship between the scores on the managing student behavior scale and the teacher response about their intention to stay or leave, there is a positive (and significant) correlation. Teachers who indicate an intention to stay have a (statistically significantly) higher score on the managing student behavior scale, and the Pearson correlation (.280) between the two variables is **positive** and statistically significant (though not practically

very strong). Looking at the items in the scale, this makes sense. Teachers who indicate higher levels of agreement with statements about how well student behavior is managed are more likely to indicate an intention to stay in that school.

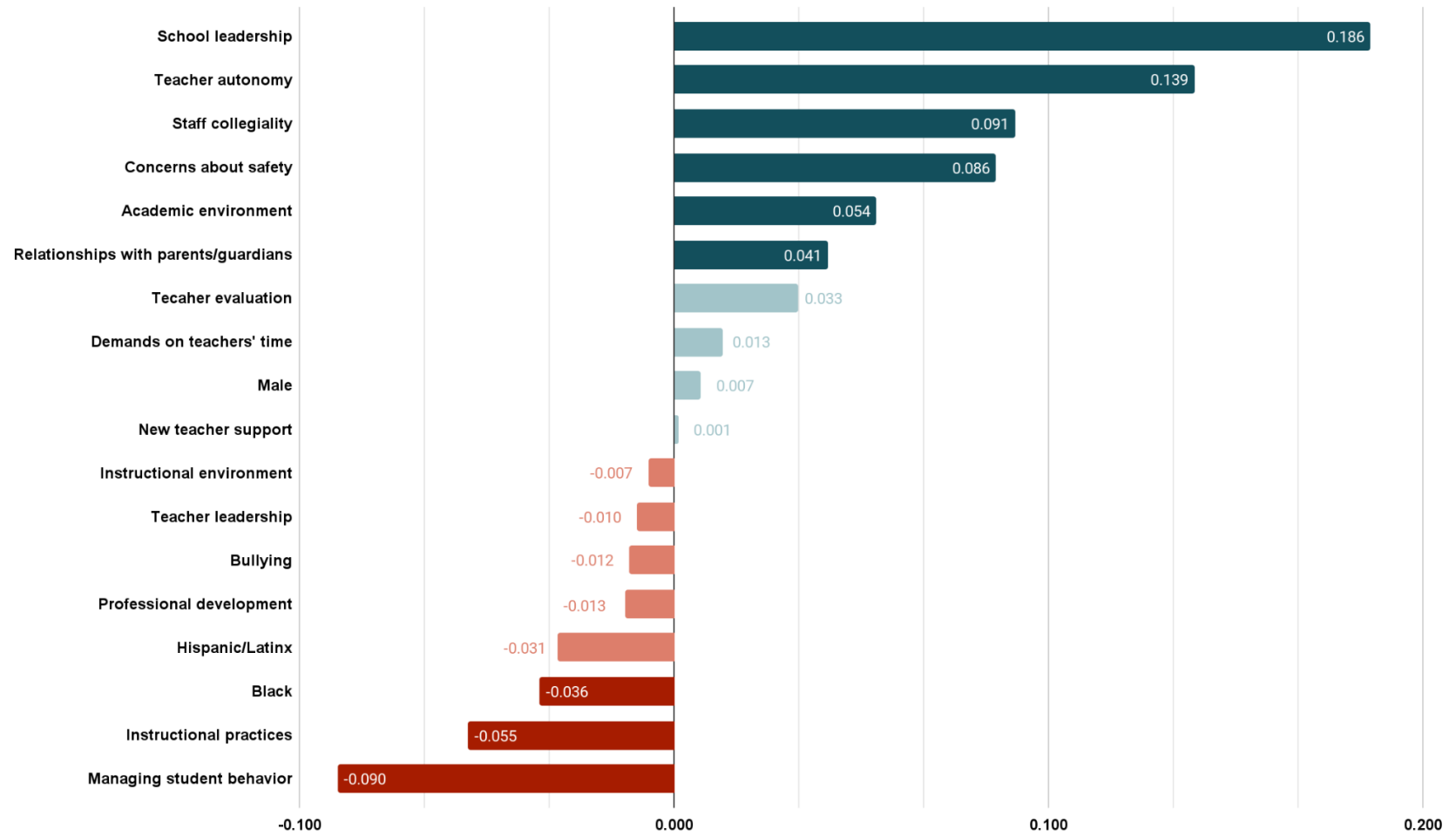
However, in the regression model, there is a **negative** coefficient for the managing student behavior score. Why would this be? One possible explanation is that the original relationship between the two variables is so close to zero that the change in direction is just noise. But, we have already seen that this is not the case with the bivariate correlation. A second possible explanation is that there is a multi-collinearity problem. That is, the independent variables are too correlated with each other such that the overall model is not well developed. Another way to say this is that there are two or more independent variables that are redundant. The multi-collinearity diagnostics for this model, though, do not indicate any real concerns.

A third possible explanation is what Falk & Miller (1992) refer to as “real suppression.”¹⁴ In that case, an important and necessary independent variable suppresses the effect of another independent variable. When this is the case, the correct sign interpretation is that given by the regression model. So, it is possible that a necessary independent variable (perhaps school leadership or the concerns about safety scale) are suppressing the effects of the managing student behavior scale.

Thus, there is some messiness in the model with respect to the managing student behavior scale. That said, likely the more relevant finding is that the concerns about safety scale is positively associated with an intention to stay. Teachers who feel respected, safe, and secure in the school are more likely to indicate an intention to stay in that school.

¹⁴ Falk & Miller (1992)

Figure 11. Teacher Retention Predictors of Staying



CONCLUSIONS / SIGNIFICANCE

Summary of Findings

Teacher working conditions are student learning conditions in at least a couple of ways. First, teachers with better working conditions are more satisfied teachers and more satisfied teachers are better teachers.¹⁵ Second, teacher working conditions are correlated with teacher retention, and a more stable workforce within schools contributes to a better school climate which leads to better student outcomes.¹⁶ Based on this analysis, teachers in MERC divisions were slightly less likely to indicate an intention to stay in their current school (77.8%) than teachers across Virginia (82.1%). The difference is statistically significant ($t=-8.198$, $p < .000$). It is hard to say why this would be the case for MERC divisions, but it is notable. Also, there is significant variation across the divisions in the percentage of teachers indicating an intent to stay in their current school. The range is from 62.5% to 88.9%. That variation is dramatic and worth additional exploration. If teacher retention is better or worse in some divisions, is that largely because of factors within the schools or within the school division? The focus of the analysis in this report is on school-level factors, but subsequent research might focus on division-level factors that contribute to teacher turnover.

Demographically, from the data available to us, middle school teachers are slightly less likely to indicate an intent to stay (75.9%) than any other group. There are no differences by gender, and the findings by teacher experience are a bit complicated. For example, teachers who have been in their current school for more than 20 years are most likely to indicate an intent to stay (83.4%). Additionally, teachers who have been in their current school 4-10 years are less likely to indicate an intent to stay (75.8%) than teachers who have been in their current school for 11-20 years (78.8%).

With respect to race, we found that Black teachers are less likely to indicate an intent to stay (70.6%) than any other group. We do not know if these differences vary across the MERC divisions or if the differences are skewed by data from a small number of divisions. Regardless, the findings regarding Black teachers is troubling. According to federal data from 2017-18, only about 7% of all teachers are Black.¹⁷ That is a problem on its own. That Black teachers are indicating an intention to leave their current school at higher rates than other teachers compounds this problem. Our public education system needs more Black teachers and needs for them to be part of a stable workforce within schools.

The working conditions data show that for every working conditions scale, MERC teachers scored lower than teachers across Virginia. In other words, MERC teachers report generally

¹⁵ Kunter, et al. (2013)

¹⁶ Darling-Hammond (2003)

¹⁷ [IES: Characteristics of Public School Teachers](#)

worse working conditions than teachers in the rest of Virginia. This may provide some clues as to why fewer teachers in the MERC divisions indicated an intention to stay within their schools in the subsequent year. The working conditions scale with the highest scores, across MERC divisions and Virginia, is staff collegiality. Of all of the working conditions scales, teachers are most satisfied with collegiality. On the other end, the working conditions scale with the lowest scores, across MERC divisions and Virginia, is demands on teachers' time. Of all of the working conditions scales, teachers are most dissatisfied with demands on their time.

As depicted in the charts in the appendix, teacher working conditions also vary considerably across the MERC divisions. This is particularly true for the professionalism scales, and even more specifically the teacher leadership and teacher autonomy scales. Subsequent research might parse the variance in teachers' intentions to stay in their current school to see if the majority of the variance is within schools, between schools, or between divisions. That would help us know, for instance, if variation in self-reported teacher autonomy is largely a building-level issue or a division-level issue. This would help leaders at all levels to know where to focus resources to improve teacher autonomy.

Though teachers in MERC divisions are most dissatisfied with the demands on their time, this scale is not a significant predictor of teachers' intention to stay in their school. Instead, the teacher working conditions that have the greatest impact on a teachers' stated intention to stay in their current school are, on the positive side of the ledger, school leadership followed by teacher autonomy. On the negative side of the ledger, managing student behavior and instructional practices have the most significant impact on teachers' stated intention to stay in their current school. Teachers are most likely to indicate an intention to stay if they feel good about the leadership in their school and feel a higher sense of autonomy. On the other hand, teachers are least likely to indicate an intention to stay if they view the school as having insufficient support and clear policies for managing student behavior. The former findings are consistent with prior research; school leadership and teacher autonomy have been shown to be significantly correlated with teacher retention. The latter finding, though, is complicated. It is possible that teachers in schools that need to have the most clear, consistent, data-driven policies for managing student behavior are also in schools with the most student behavioral problems, thus prompting them to consider leaving for another school. This hypothesis is buttressed by the finding that concerns about safety are positively associated with stated intention to stay. If you look at the items in the concerns about safety scale, teachers who more strongly agree that they feel respected, safe, and secure are significantly more likely to indicate an intention to stay in their current school.

Implications and Recommendations

This final section of the report includes a few themes from the analysis and some recommendations for what schools and school leaders can do to improve teacher working conditions and, therefore, teacher retention.

School Leadership

The findings from this analysis track well with prior research on teacher retention, particularly with respect to the primacy of school leadership. In other words, when it comes to teacher retention, strong school leadership is the most important working condition for teachers. A recent policy brief crafted for MERC divisions reported the results of a modified meta-narrative review of the literature, and concluded that there are effectively five roles that school principals can take on to best promote teacher retention. Table 5 below comes from that report and describes the roles and actions principals can take to improve teacher retention.

These areas or roles are not independent; they overlap. For example, a principal who obtains funds for professional development on classroom management is being an instructional leader, a safety officer, and a bureaucratic shield. Additionally, a principal who undertakes respectful classroom observations and competently communicates the results is being a relational trust builder and an instructional leader. Thus, the work of a principal is interpersonal and dynamic. As Kraft, Marinelli & Yee (2016) write, “Changing the culture and collective practices of a teaching staff is an interpersonal process that involves complex social dynamics.” Ultimately, the evidence reviewed suggests that the principal who best focuses on these five areas and can best do that interpersonal work is most likely to retain teachers.¹⁸

Table 5. Roles and Action Items for Principals

FIVE ROLES FOR THE PRINCIPAL				
Shared Vision developer	Instructional Leader	Relational Trust builder	Safety officer	Bureaucratic shield
<ul style="list-style-type: none"> ❖ Everyone knows what kind of school he or she wants and has. ❖ Everyone knows and 	<ul style="list-style-type: none"> ❖ Building community ❖ Providing professional development ❖ Leading curriculum 	<ul style="list-style-type: none"> ❖ Respect ❖ Competence ❖ Personal Regard ❖ Integrity 	<ul style="list-style-type: none"> ❖ Clearly communicates conduct & safety expectations ❖ Backs up teachers when 	<ul style="list-style-type: none"> ❖ Minimize the amount of paperwork required of teachers ❖ Deals with pressures from

¹⁸ Kraft, Marinelli & Yee (2016)

agrees what is expected of them. ❖ Everyone is committed to helping every student learn.	creation ❖ Supervising teachers ❖ Supporting student learning.	they need it ❖ Provides resources for teachers to better manage classroom behavior.	outside the school that interfere with teaching ❖ Gets resources for the school.
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FIVE POTENTIAL ACTION ITEMS

Consistently review and revisit the school's mission and vision statements as a full faculty and staff, and use it as a guide for important decisions.	Prioritize leadership for learning by keeping track of the amount of time spent on various activities and noting how much of that time is spent observing and talking with teachers about teaching and learning.	In addition to faculty and staff meetings, hold regular one-on-one meetings with faculty and staff to discuss plans, listen to faculty staff members' wishes and concerns, and incorporate their ideas.	Provide staff development focused on classroom management and restorative justice.	Develop and implement systems and use technologies that allow everyone in the school to work smarter not harder.
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Professionalism and Relational Trust

The table above shows that principals can improve teacher retention by, among other things, being the chief safety officer and a bureaucratic shield. That aligns with teacher reports on wanting to feel respected, safe, and secure as well as teacher reports of significant demands on their time. Furthermore, the middle role in the table is consistent with the findings about teacher professionalism (specifically autonomy and collegiality). According to Bryk & Schneider (2004), “[t]rust is the connective tissue that holds improving schools together.” Specifically, relational trust is “[a]n interrelated set of mutual dependencies...” that “...are embedded within the social exchanges in any school community.” Irrespective of formal power arrangements, these dependencies must be strengthened such that desired outcomes are achieved and members of the school community feel empowered.¹⁹

The principal, for example, needs faculty support to maintain a cohesive professional community that productively engages parents and students. Teachers' work, in turn, depends on decisions that the principal makes about the allocation of resources to their classrooms. Parents depend on both teachers and the principal to create an

¹⁹ Bryk & Schneider (2004)

*environment that keeps their children safe and helps them learn. Such dependencies create a sense of mutual vulnerability for all individuals involved. Consequently, deliberate action taken by any party to reduce this sense of vulnerability in others—to make them feel safe and secure—builds trust across the community.*²⁰

According to a summary of Bryk & Schneider’s work, relational trust is built through respect, personal regard for others, competence, and integrity.²¹

- **Respect:** Genuinely listening and valuing the opinions of others during social discourse that takes place across the school community.
- **Personal Regard for Others:** The willingness of members of a school community to extend themselves beyond what their role might formally require in any given situation. Actions are made in an effort to reduce others’ sense of vulnerability.
- **Competence:** Execution of an individual’s formal responsibilities. There is recognition of the interdependence of our roles in attaining the desired outcome. When negligence or incompetence is allowed to persist in any one role in the school, it undermines trust.
- **Integrity:** Consistency between what a person says and does. Others believe and perceive that a moral-ethical perspective guides one’s work.

Race, Working Conditions and Teacher Retention

The finding with respect to Black teachers is problematic because a diverse teaching force is critically important. Children of all races need Black teachers, and Black students particularly need Black teachers. The research on teacher-student matching is consistent and clear: students do better when they have a teacher of the same race.²² Also, “...a diverse teaching force challenges the assumption that some of the qualities needed most by high-quality, effective teachers -- intelligence, intellectual curiosity, and deep content knowledge -- are difficult to find in large supply amongst individuals of color seeking to enter the teaching profession”.²³

Retaining Black teachers and Teachers of Color (TOCs) requires a multi-faceted approach. [A 2018 Learning Policy Institute](#) report, consistent with the narrative above, points to the importance of leadership in retaining TOCs.²⁴ The report suggests that leadership preparation programs need to recruit more TOCs to prepare them for administrative roles, and that once in leadership roles, districts can partner with universities to “...provide training for school administrators so they can create work environments that encourage teachers of color to stay.” [Carter Andrews et al. \(2018\)](#) suggest that we need to change the narrative entirely on diversifying the teacher workforces.²⁵ They view that narrative “...as

²⁰ Bryk (2003)

²¹ [EL Education’s summary](#)

²² Dee (2001); Egalite, Kisida,& Winters (2015)

²³ Watson et al. (2015)

²⁴ [2018 Learning Policy Institute](#)

²⁵ Carter Andrews et al. (2018)

needing to be more explicit about structural, institutional, and environmental mechanisms that uphold colonial, white supremacist ideals and work against efforts to recruit and retain TOCs.” Furthermore, specifically on teacher retention, the authors call on “...superintendents to be intentionally inclusive in their leadership and practice, provide excellent training and support, and actively appreciate/reward the additional mentoring and support work that TOCs do, particularly for Students of Color.”

These findings, conclusions and recommendations are based on data from the 2019 VDOE Working Conditions Survey. A subsequent version of the survey was fielded this Spring (2021). While noting the entirely unusual nature of the schooling endeavor during the last year, amidst a pandemic, there will be some opportunity to see if working conditions have changed over time. There is also the possibility of asking more nuanced questions of these data using more sophisticated statistical techniques. Those kinds of analyses are outside the scope of this report as they are less likely to lead to true actionable conclusions for the MERC divisions. For example, multilevel modeling would allow us to parse the variance in the staying dependent variable within and between schools. We can also pool the working conditions to the school level and see the degree to which collective beliefs within a school about any of the working conditions have an impact on individual teachers’ responses to the retention question. Thus, there is more work to be done to understand the relationship between teacher working conditions and teacher retention in Virginia and in the MERC divisions. We look forward to continuing that work and hope that this report is meaningful in its own way.

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APPENDIX A: SURVEY SCALES BY DIVISION

The following charts showing the scores on the teacher working conditions scales disaggregated by MERC divisions.

Figure 12. Teacher Leadership

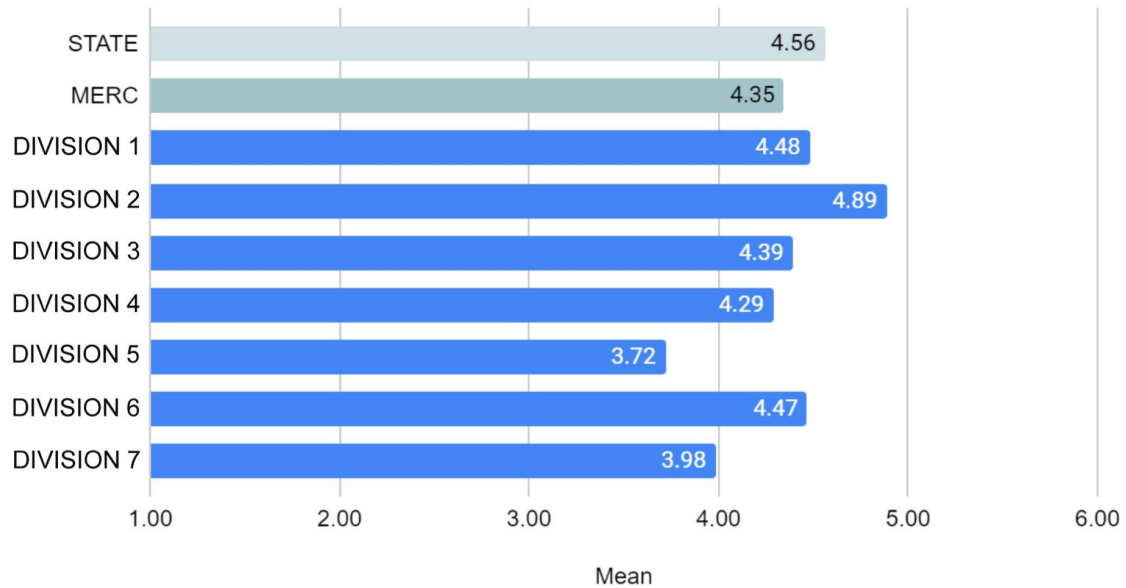


Figure 13. Teacher Autonomy

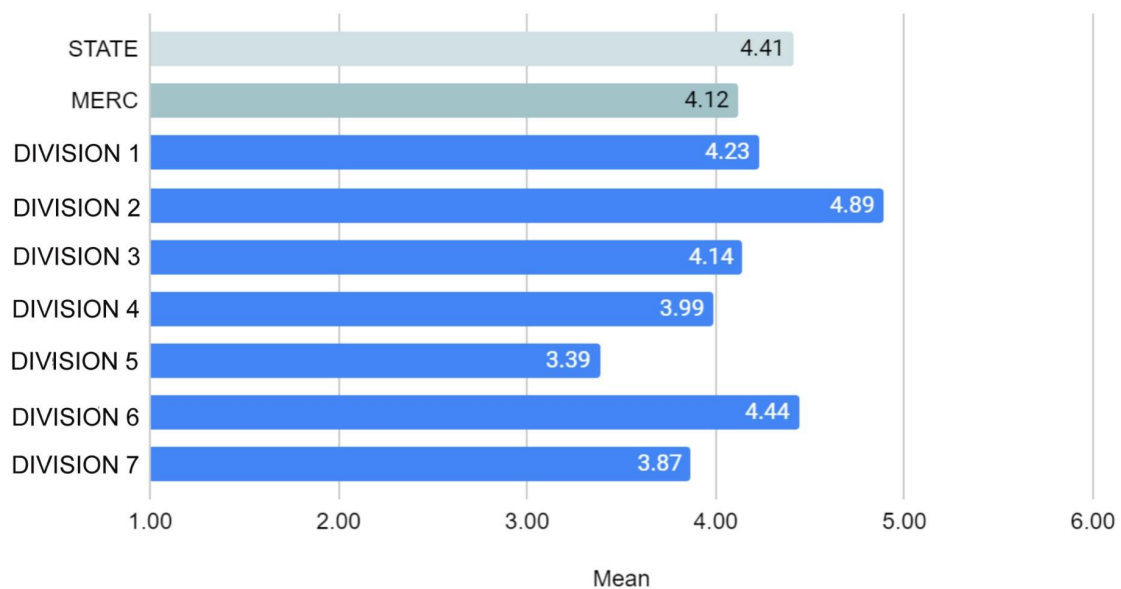


Figure 13. Staff Collegiality

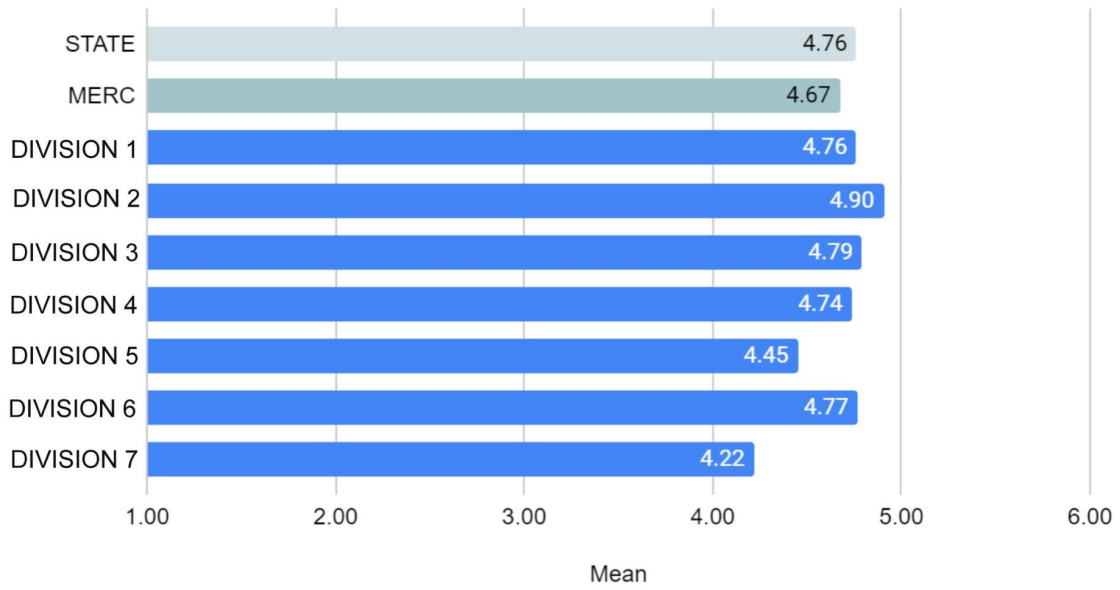


Figure 14. Instructional Practices

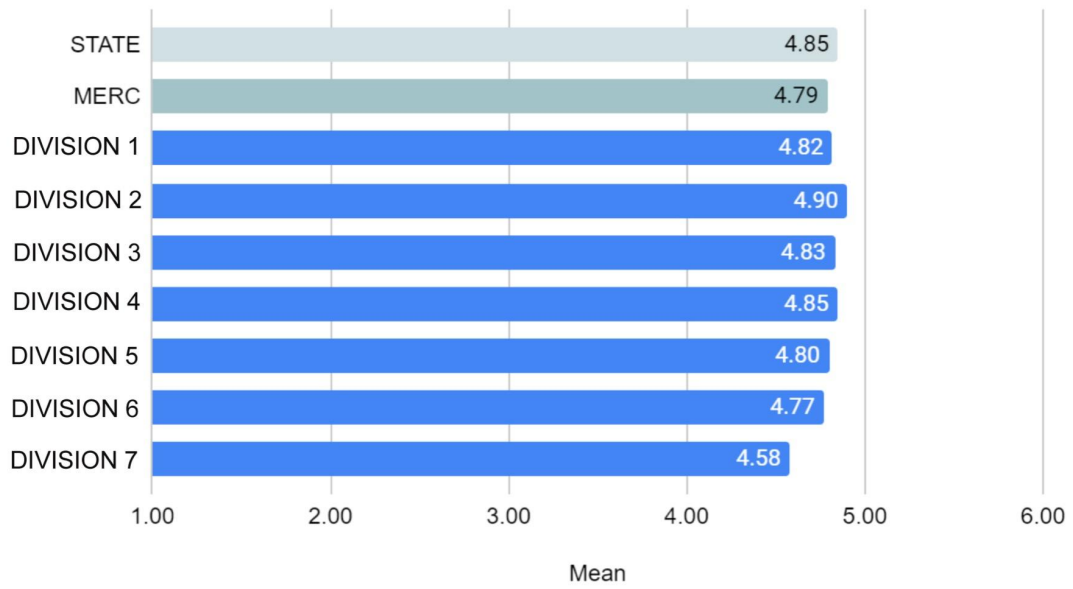


Figure 15. Academic Environment

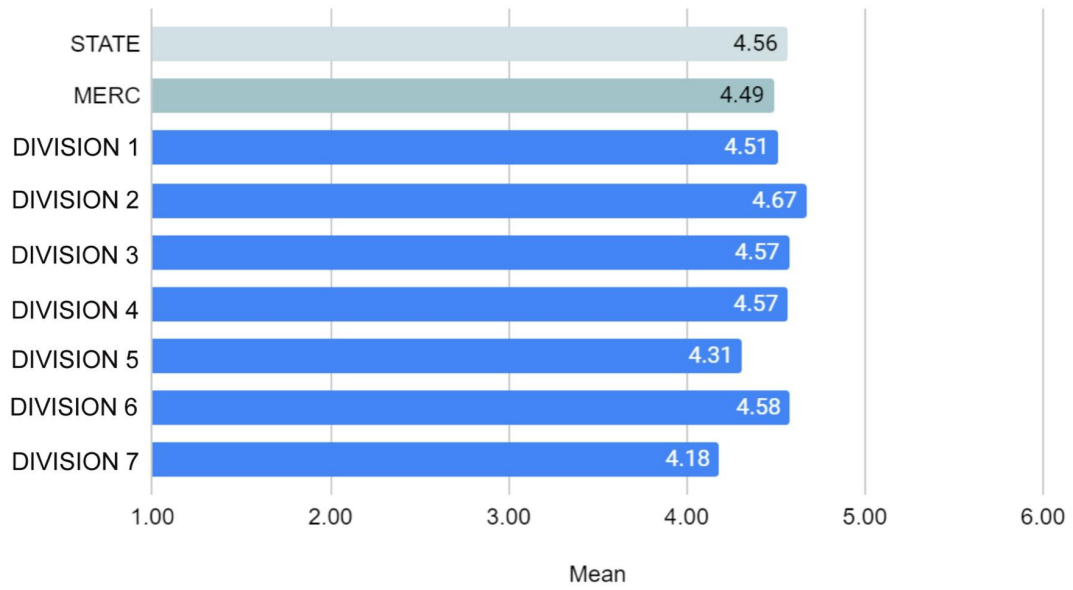


Figure 16. Instructional Environment

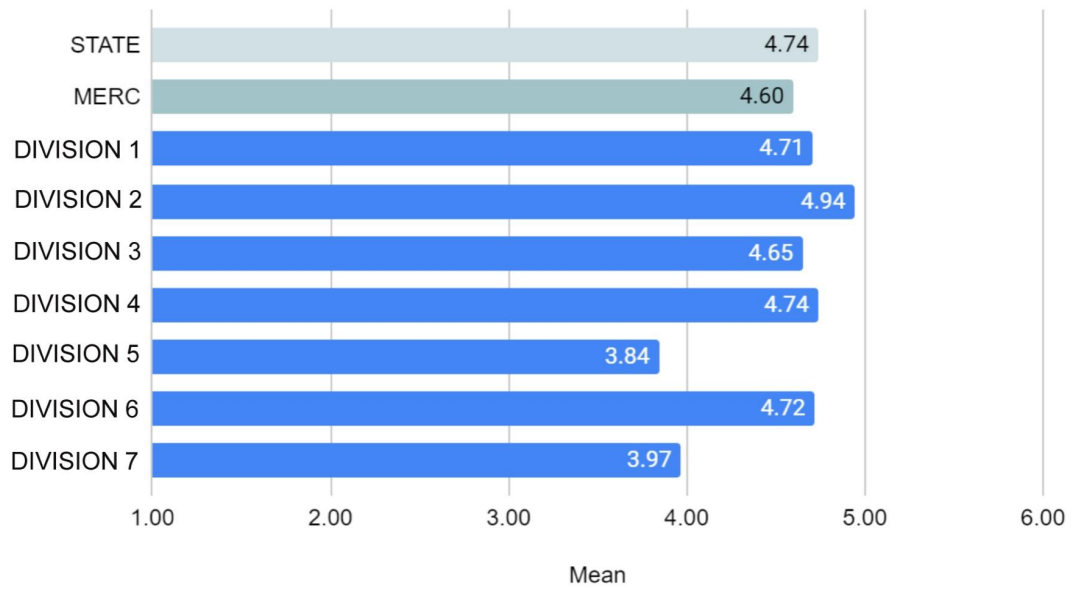


Figure 17. School Leadership

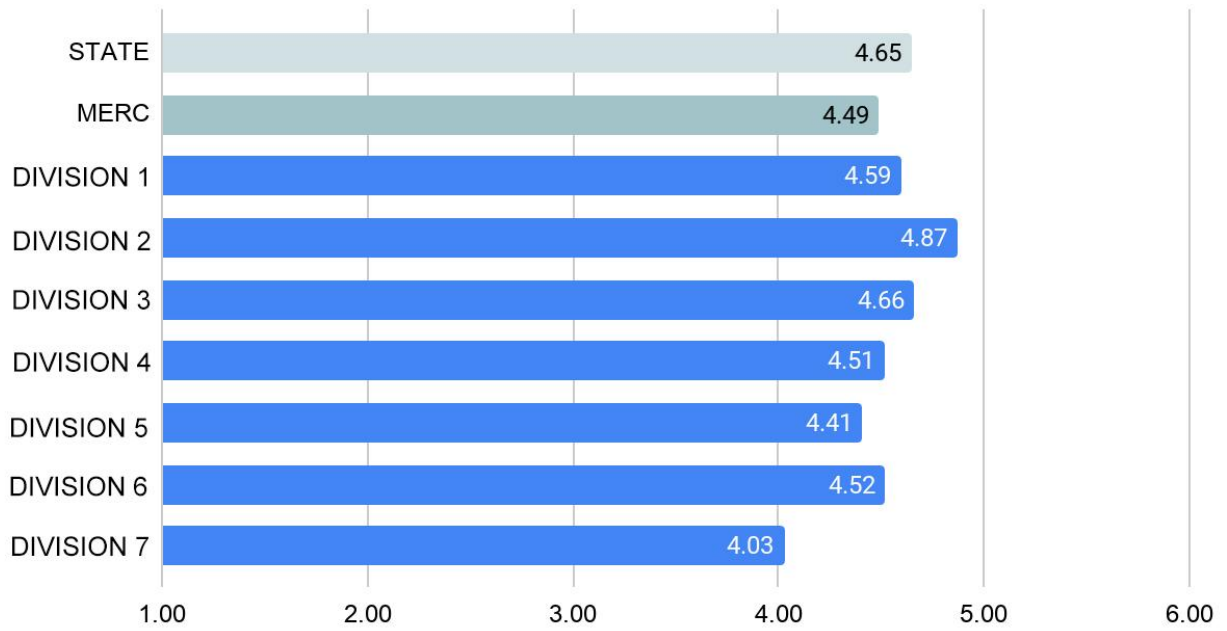


Figure 18. Teacher Evaluation

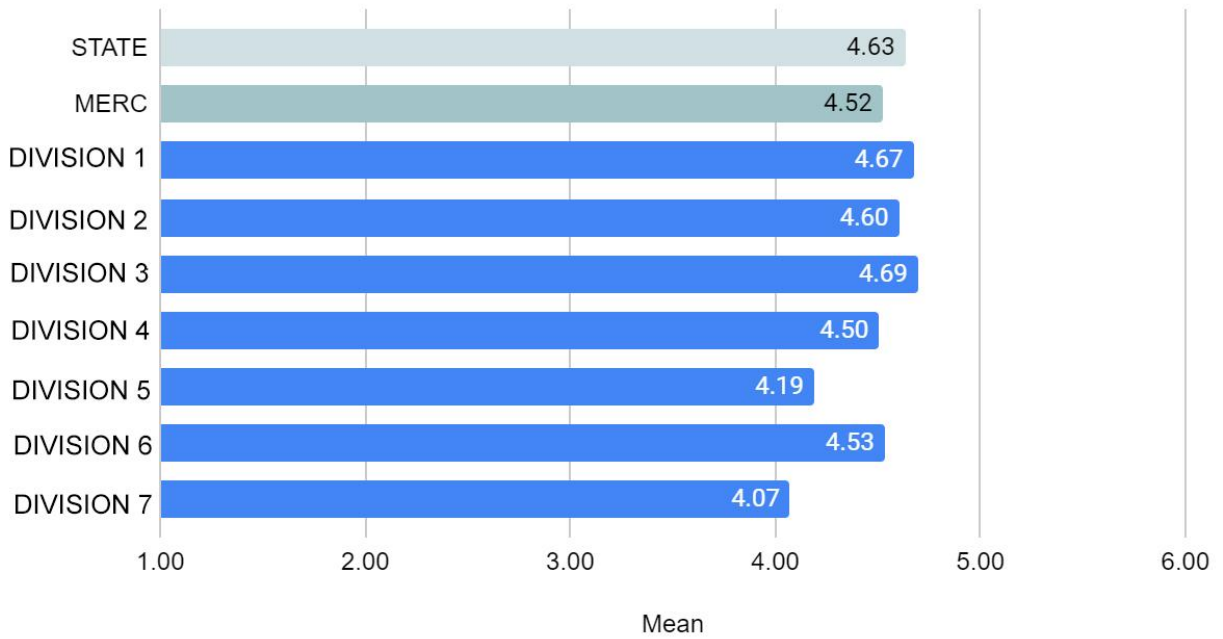


Figure 19. Professional Development

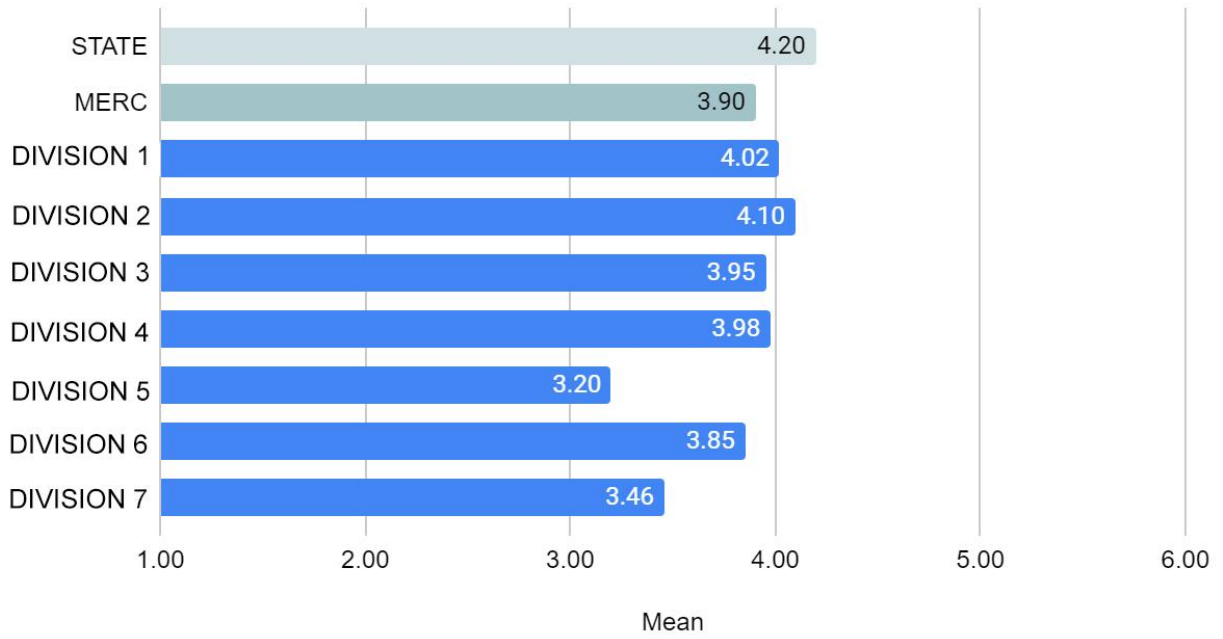


Figure 20. Demands on Teachers' Time

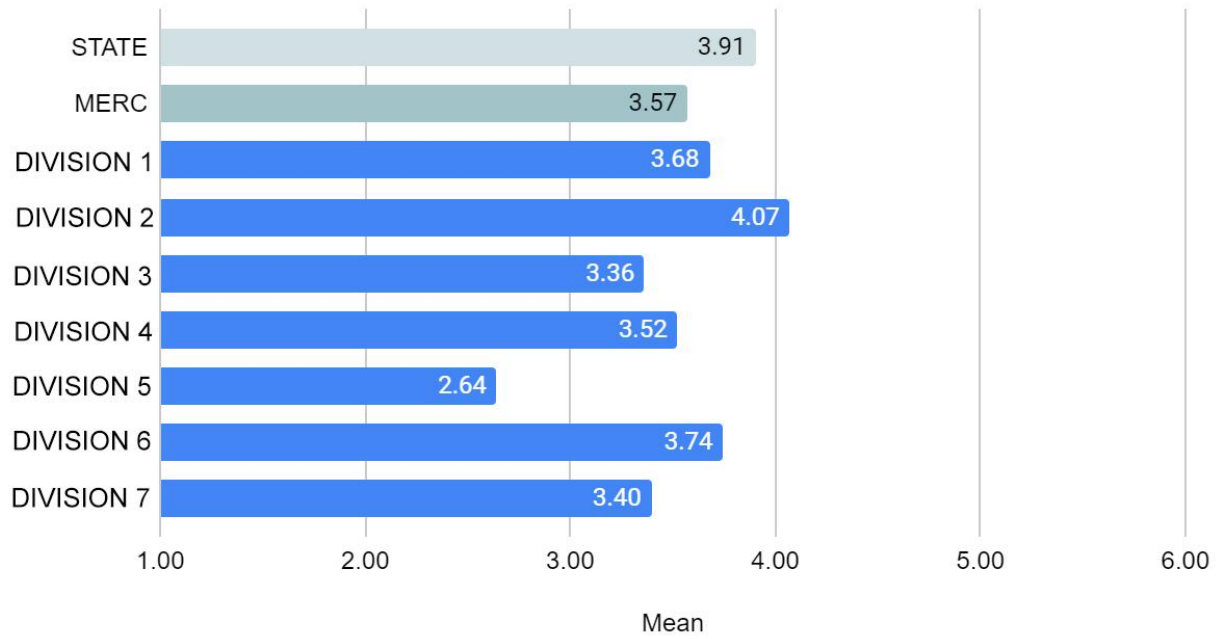


Figure 21. Managing Student Behavior

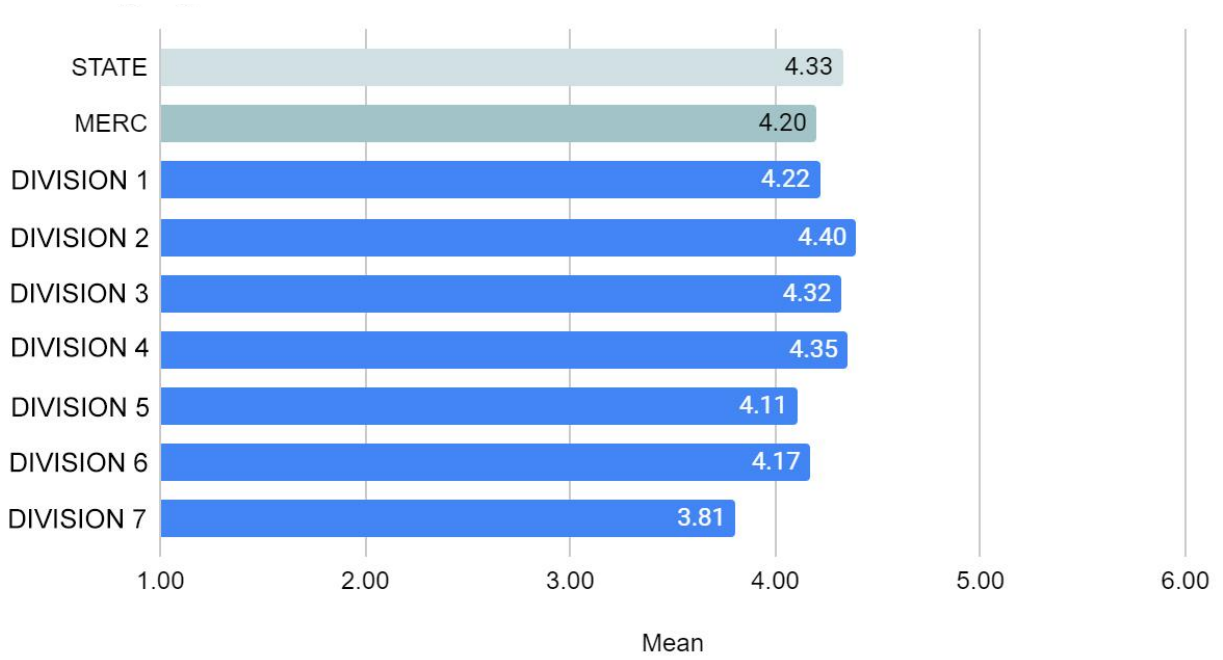


Figure 22. Relationships with Parents/Guardians

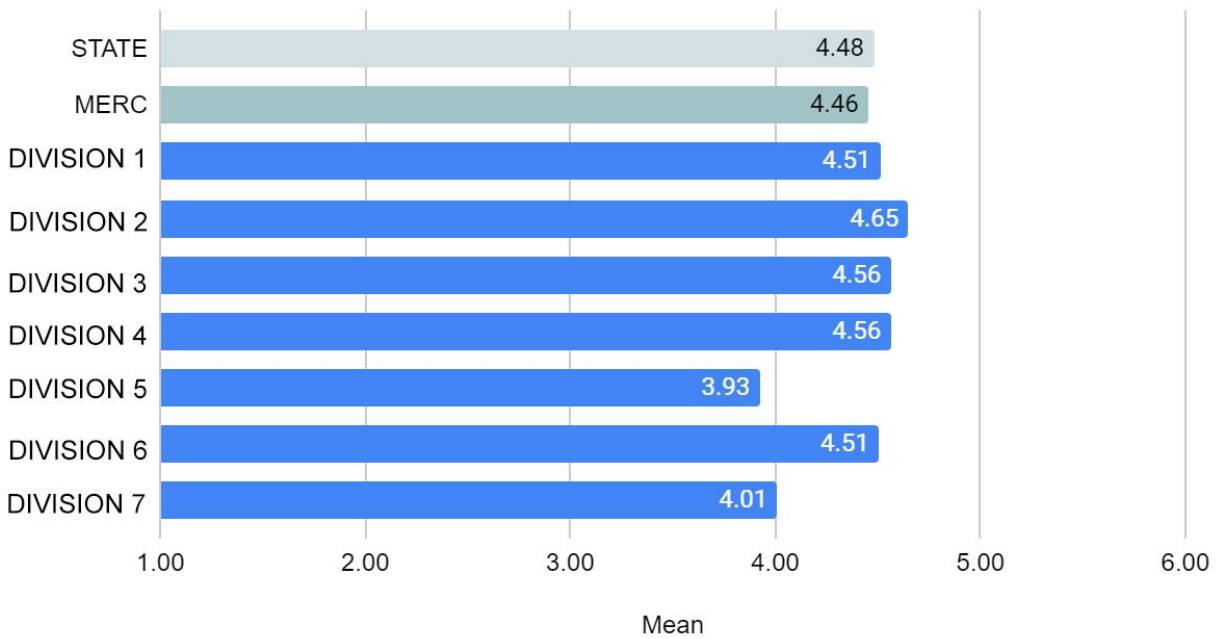


Figure 23. Concerns about Safety

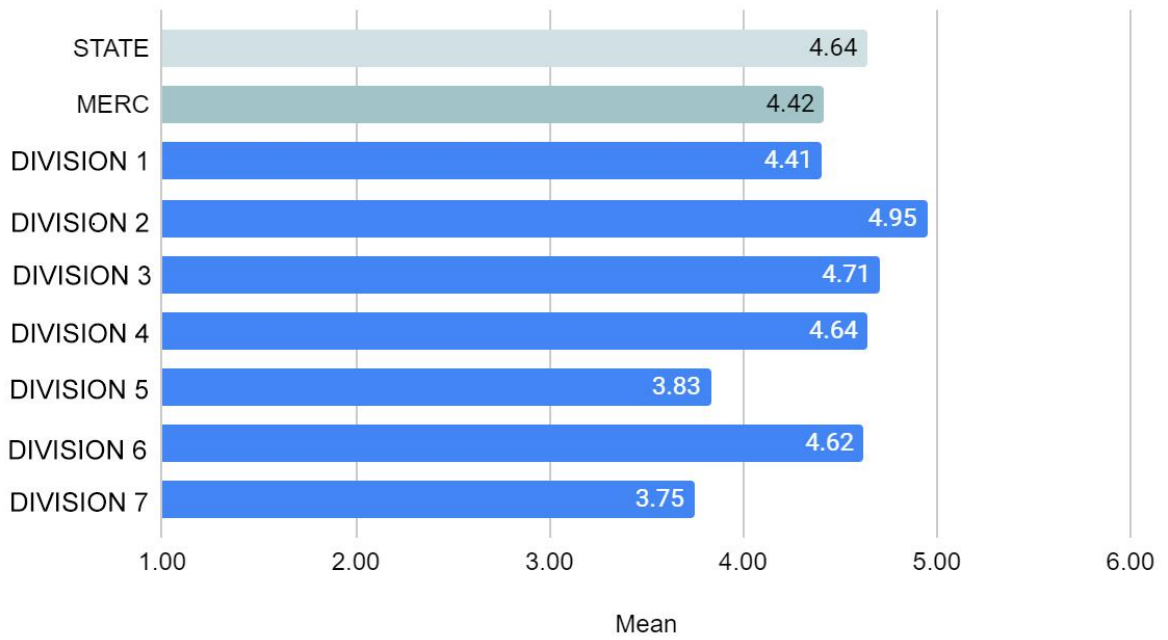


Figure 24. Prevalence of Bullying

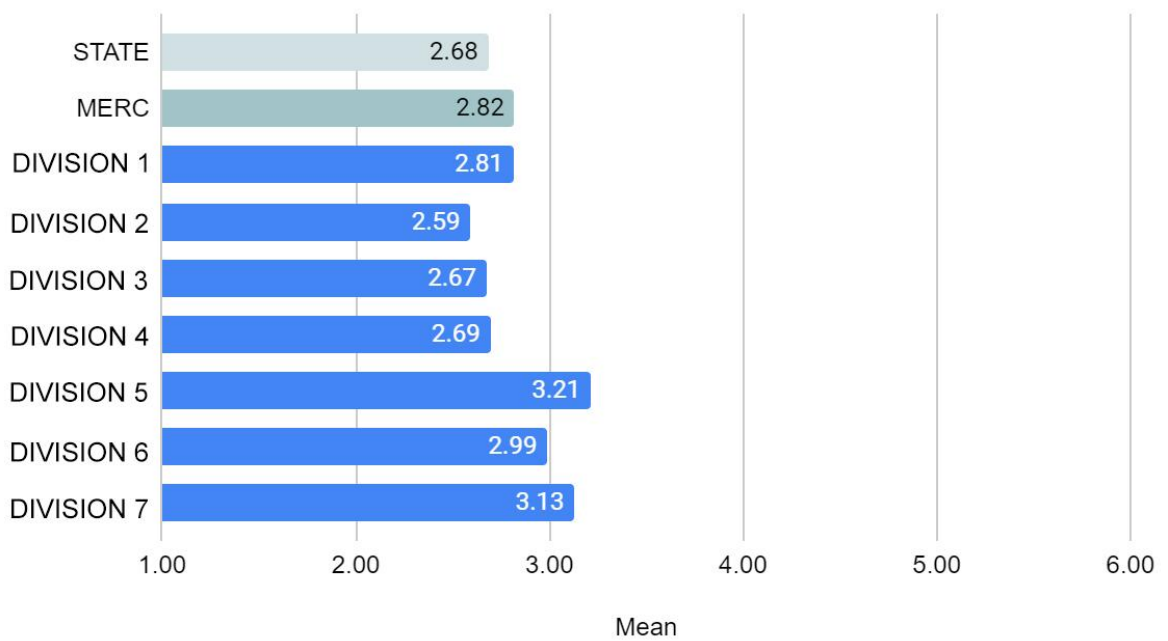


Table 6. Comparison of scale scores across State, MERC region, and MERC divisions

	Teacher Leadership	Teacher Autonomy	Staff Collegiality	Instructional Practices	Academic Environment	Instructional Environment	Teacher Evaluation	School Leadership	Professional Development	Demands on Teachers' Time	Managing Student Behavior	Relationships with Parents/Guardians	Concerns about Safety	Prevalence of Bullying
STATE	4.56	4.41	4.76	4.85	4.56	4.74	4.63	4.65	4.20	3.91	4.33	4.48	4.64	2.68
MERC	4.35	4.12	4.67	4.79	4.49	4.60	4.52	4.49	3.90	3.57	4.20	4.46	4.42	2.82
Division 1	4.48	4.23	4.76	4.82	4.51	4.71	4.67	4.59	4.02	3.68	4.22	4.51	4.41	2.81
Division 2	4.89	4.89	4.90	4.90	4.67	4.94	4.60	4.87	4.10	4.07	4.40	4.65	4.95	2.59
Division 3	4.39	4.14	4.79	4.83	4.57	4.65	4.69	4.66	3.95	3.36	4.32	4.56	4.71	2.67
Division 4	4.29	3.99	4.74	4.85	4.57	4.74	4.50	4.51	3.98	3.52	4.35	4.56	4.64	2.69
Division 5	3.72	3.39	4.45	4.80	4.31	3.84	4.19	4.41	3.20	2.64	4.11	3.93	3.83	3.21
Division 6	4.47	4.44	4.77	4.77	4.58	4.72	4.53	4.52	3.85	3.74	4.17	4.51	4.62	2.99
Division 7	3.98	3.87	4.22	4.58	4.18	3.97	4.07	4.03	3.46	3.40	3.81	4.01	3.75	3.13

APPENDIX B: METHODOLOGICAL STATEMENT

When conducting regression analysis with a binary or dichotomous variable, there are options including ordinary least squares (OLS) and logistic regression. There are advantages and disadvantages to each approach, and we chose to employ OLS. Using this linear probability model is consistent with our commitment to ease of interpretation, as stated earlier. That is, we specifically dichotomized the dependent variable for ease of interpreting the output of the models. Taking that one step further, the results of OLS are much easier to interpret than the results from logistic regression. Furthermore, generally speaking, the linear probability model fits the data as well as the logistic model. ["In fact, in many situations, the linear and logistic model give results that are practically indistinguishable except that the logistic estimates are harder to interpret \(Hellevik 2007\)."](#) The logistic model is more likely to fit the data better where the probabilities being modeled are extreme (e.g. the likelihood that a bank transaction is fraudulent); where probabilities are between, say, .20 and .80, the linear probability model is more than sufficient. And, as demonstrated above, the probability that teachers indicate an intention of staying in their current school on the survey is not extreme. Thus, OLS regression analysis is used for this study.

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