A Culture of Success—Examining School Culture and Student Outcomes via a Performance Framework

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Abstract
This study is a report of the relationship between a collaborative school culture, teacher quality and the influence these variables have upon student attendance and suspensions. The research is based upon data gathered from 50 public schools throughout the southeastern United States. Surveys were administered to examine teacher quality characteristics, elements of educational leadership, and components of a collaborative school culture. Data were analyzed in relation to teacher input characteristics such as certification, years teaching, percentage teaching out of field, and highest degree obtained. The findings revealed that as teacher collaboration increased, the model predicted that student suspensions would decrease by 6.709%. In addition, the model predicted that when the percentage of out-of-field teachers within a school increased, student suspensions would decrease by 0.16%. Finally, as the percentage of non-certified teachers within a school increased, the student suspension percentage increased by .22%. The findings offer valuable insight into the characteristics of quality teaching and school culture that demonstrate the greatest impact on student attendance and suspensions and may influence educational policy, teacher training, educational leadership, and school reform initiatives.

Keywords: school culture, school leadership, student absenteeism, suspensions

1. Introduction
In this current educational context of high stakes accountability, public schools in the United States are under significant pressure to increase student achievement. This pressure is even greater in high poverty environments as those schools are impacted by multiple challenges, which serve to intensify the problem. Schools are making considerable efforts to raise student achievement, yet the evaluation methods used often include only a single annual exam, offering a snapshot that gives schools little direction toward changes they can make and no way to measure progress toward the goal. Schools yearn for measurable, formative ways to move toward their goal of improved learning for all students. A continuous cycle of sharing and collectively using data for growth is a key to successful school improvement and reform, especially in high poverty schools (David & Talbert, 2012; Fullan, 2001; Reeves, 2003).

Research affirms that student learning will not increase substantially unless students are actually in the classroom with the opportunity to learn (Jacobson, 2008; Chang & Romero, 2008). Florida schools face dramatic challenges in these areas each year with nearly 10% of the student population experiencing 21 or more days absent and 172,545 out-of school suspensions (FDOE, 2014). As these challenges mount for schools throughout the state, we look to the literature for solutions including research suggesting elements within the control of schools: (1) the characteristics and quality of its teachers (Darling Hammond, 1997, 2000; Darling-Hammond & Ducommun, 2007; Darling-Hammond, Wilhoit, & Pittenger, 2014), (2) establishing a strong school culture that supports teacher learning and improvement (Deal & Peterson, 1998; Cleveland et al., 2012) and (3) the practices of school leaders in shaping a collaborative school culture (Teske & Schneider, 1999; Cleveland et al., 2012; Hsin-Hsiange & Mao-neng, 2015).
Rather than focus directly on standardized test scores, this study focuses on two distinct variables which have been found to influence student achievement as well as student efficacy and graduation rates (Sheldon, 2003): attendance rates and out-of-school suspensions. Fifty high poverty schools in various districts throughout the state of Florida were studied to determine the relationship among student outcomes (student attendance and student suspensions) and measurable teacher quality characteristics, the components of a collaborative of school culture, and the practices of school leaders in relation to school culture.

The purpose of the study was to determine if teacher quality characteristics and school culture components are related to student attendance and suspension rates. The methods chosen for this study provide insight into the impact school culture and the characteristics of effective teaching may have upon student outcomes.

2. Review of the Literature

2.1 Teacher Quality Characteristics

The quality of a teacher can have a direct and lasting impact on student achievement (Ingersoll, 2003; Rice, 2003; Wright, Horn, & Sanders, 1997; Darling-Hammond & Ducommun, 2007). A quality teacher can negate the effects of a student’s socio-economic status and lead to increased student outcomes (Darling-Hammond, 1997; Porter-Magee, 2004). Additionally, no adults are more important to student success than teachers (Cochran-Smith & Fries, 2005a; Haycock, 2001; Wechsler, Tiffany-Morales, Campbell, Humphrey, Kim, & Shields, 2007). The importance of teacher quality is further exemplified by research that determined teacher expertise and better predictors of student success than class size, teacher salaries, and per-student spending (Darling-Hammond, 1997). Thus, it is imperative to determine what constitutes quality teaching and adapt policies that ensure that quality teachers are trained, recruited, and retained to meet the learning goals of students.

Defining “quality” teaching and quantifying teacher quality characteristics is complicated and highly contested (Walsh, 2007; Darling-Hammond & Ducommun, 2007). However, educational researchers have studied indicators of teacher quality found to promote positive student outcomes. For policy makers to provide comprehensive teacher evaluation programs, it is paramount to understand what constitutes quality teaching. Linda Darling-Hammond (2000) found that student achievement increased and dropout rates decreased when teachers were certified in their field, obtained their master’s degrees, and were enrolled in graduate studies. In addition, she contends that teacher preparation and certification had the strongest correlation for student achievement, more than any other school based factors. Furthermore, teaching in field, in math and science particularly, led to increased student achievement (Goldhaber & Brewer, 1997).

Specifically, the quality of a teacher may have a direct and lasting influence upon student outcomes (Ingersoll, 2003; Rice, 2003; Wright, Horn, & Sanders, 1997; Hsin-Hsiange & Mao-neng, 2015). Furthermore, teacher quality is a better predictor of student success than class size, teacher salaries, and per-student spending (Darling-Hammond, 1996). A quality teacher can negate the effects of a student’s socio-economic status and lead to increased student outcomes (Darling-Hammond, 1996; Porter-Magee, 2004).

There are numerous teacher quality factors that have been proven to significantly influence student achievement and student outcomes. Higher Scholastic Aptitude Test (SAT) scores and higher grades for teachers in college (Gitomer, 2007) as well as high level of general intelligence, content knowledge and knowledge of pedagogical techniques including scaffolding and ability to adapt to diverse learners (Darling-Hammond & Ducommun, 2007) resulted in higher student outcomes. Specifically in poor schools, student achievement has shown to be improved when schools employ strategies to improve teacher qualifications, such as hiring teachers with higher Liberal Arts and Sciences Teacher (LAST) certification exam scores (Boyd, Lankford, Loeb, Rockoff, & Wychoff, 2008). Further research affirms the importance of educator experience suggesting that years teaching shows a very strong relationship with increased student achievement (Darling-Hammond, Berry, & Thoreson, 2001; Greenwald, Hedges, & Laine, 1996).

2.2 School Leadership & Collaborative Culture

In addition to quality teachers, school leadership plays a paramount role in influencing teacher-working conditions. Effective instructional leadership is generally recognized as the most important characteristic of school administrators (Hoy & Hoy, 2009). Cosner and Peterson (2003) go so far as to claim that promoting teacher professional development is the most influential educational leadership behavior. Principals and administrators are needed to lead educational improvement, foster effective change efforts, lead the implementation of new standards, and are central to shaping strong, professional school cultures (Deal & Peterson, 1998).
Fullan (2001) suggests that school leaders participate in activities that encourage teacher learning. These activities may include leading educational improvement, fostering effective change efforts, and directing the implementation of new standards, which are central to shaping strong, professional school cultures (Deal & Peterson, 1998; Webb & Norton, 2013). In addition, educational leaders should establish a partnership with teachers to work towards the primary goal of improving teaching and learning (Hoy & Hoy, 2009). The importance of educational leadership as it relates to teacher quality and supervision is further supported by the assertion that good teaching is the ultimate goal of educational leadership and the policies and actions of educational leaders should foster ways to improve teaching and learning (Hoy & Hoy, 2008). Thus, administrators at all levels must become knowledgeable not only of the effective techniques of teacher evaluation, but more importantly of the research-based educational strategies that have been successful at improving teacher efficacy and student learning (Goddard & Goddard, 2001; VonVillas, 2004; Webb & Norton, 2013).

The relationship between effective teaching and effective leadership is reinforced in the vital role of school culture (Hsin-Hsiang & Mao-neng, 2015). Among the numerous definitions of school culture, Deal and Peterson (1990) and Schein (1985) affirm that school culture refers to the deep patterns of values, beliefs and traditions that have been formed over the course of the school’s history and which are understood by members of the school community. Peterson (2002) suggests that culture is built within a school over time as teachers, school leaders, parents and students work together. It is the school culture that often influences the staff development and professional growth that takes place within a school. Fullan and Steiglebauer (1991) and Boonstra (2013) contend that the key to successful change is not only a change in organizational structure but also more importantly a change in the culture. A positive school culture may have a significant influence on the academic and social success of the students within schools (Squires & Kranyik, 1996). When a school exhibits characteristics of a positive school culture, there are fewer suspensions, increased attendance rates, and increased achievement on standardized test scores (Anson et al., 1991; Becker & Hedges, 1992).

The culture within a school also influences student achievement (Levin, 2004). Deal and Peterson (1998), contend that higher achieving schools were those that demonstrated cultures that fostered collaboration, empowerment, and engagement. In contrast, schools with toxic cultures with little stakeholder collaboration were more likely to produce poor academic achievement. Leithwood and Seashore-Louis (1998) suggest that successful schools are more capable of increasing student achievement when the culture shares common characteristics including a commitment to the students, respect for shared decision making, a collective belief in the importance of professional growth, collective celebrations of success, and a mission grounded in the ideal that all students can achieve.

2.3 Absences & Participation

Amongst student outcomes, student attendance and student suspension rates are important factors in measuring the academic success of students. Researchers have established significant correlations between student attendance in the classroom and academic achievement (Seldon, 2003; Morrissy, Hutchison, & Winsler, 2014). Students with better attendance than their classmates exhibit superior performance on standardized achievement tests and are more likely to be retained (Barth, 1984; Nichols, 2003). Also, high rates of student absenteeism are associated with increased risk of students dropping out of school (McCluckie, 2014) and the increased likelihood of delinquent behaviors such as violence and alcohol/drug usage (Baker, 2000; Rumberger & Thomas, 2000). Such behaviors are often addressed using discipline such as out-of-school suspension. However, research suggests that the utilization of out-of-school suspensions may increase the likelihood of absenteeism (Baker, 2000; Bell, Rosen, & Dynlacht, 1994). Both traditional absenteeism (by choice of the student or family) and out of school suspensions end in the same result—the student is out of class and therefore is at a serious disadvantage academically (Baker, 2000). Understanding the significance of these student outcomes (student attendance and out-of-school suspensions) is paramount to the significance of the study.

Furthermore, a recent study of school-level attendance rates showed a significant relationship between school-level Socio-Economic Status (SES) and school-level annual daily attendance (Reardon, 2008). This relationship between attendance and student achievement is even more pronounced when examining at-risk and minority students (Morrissy, Hutchison, & Winsler, 2014). Ali and Dufresne (2008) contend that children who are most likely to be excluded from school are the ones who are least able to afford to fall behind. A Minnesota study of public school student achievement and attendance data found that boosting student attendance by as little as one percent could significantly increase test scores of minority students (Roby, 2004). A recent study by Reardon (2008) examining the relationship between school-level socio-economic status and school-level annual
daily attendance, demonstrated that the highest poverty schools exhibited the highest excessive absence rates. Thus, minority and high poverty students may have the most to gain with increased attendance.

Out-of-school student suspensions can also have wide-ranging, detrimental effects on both the individual and the school community including increased student dropout rates, homelessness and crime (Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002; Mendez, Knoff, & Ferron, 2002). Ali and Dufresne (2008) report that suspensions may increase the likelihood of involvement in the juvenile justice system, as children and youth who are sent home from school often remain unsupervised when their parents work. Students who are suspended are also less likely to graduate from high school as they seek to avoid the setting where castigation and punishment is being administered (Railsback, 2004). Baker, Sigmon, and Nugent (2001) further contend that adults who were frequently absent or suspended as teenagers are much more likely than those who were not to have inferior physical and mental health, lower paying jobs, an increased chance of living in poverty, and more reliance on welfare support.

Student suspension data has also created much controversy in the demographics of the students being suspended. A disproportional number of minority students, male students, and special education students receive out-of-school suspensions (Constenbader & Markson, 1998; Skiba & Peterson, 1999; Wu, Pink, Crain, & Moles, 1982; U.S. Department of Education Office for Civil Rights, 2014). A study of middle school student punishment practices by Skiba, Michael, Nardo and Peterson (2002) exposed a differential pattern of treatment, originating at the classroom level, wherein African-American students are referred to the office for infractions that are more subjective in interpretation. A study by Bowman (2003) of the suspension practices of schools in Kentucky found that African American students are suspended from school two to 17 times as often as whites in some districts. These issues further highlight the significance student suspensions and the reduction thereof can play upon school success and student achievement.

3. Conceptual Framework

The conceptual basis for the research is grounded in the educational performance framework (Goldhaber & Brewer, 1997; Levin, 2004). A performance framework (Figure 1) may be conceptualized as having three main parts: inputs, processes, and outputs (Rouse & Putterill, 2003).

![Figure 1. Performance framework (Rouse and Putterill, 2003)](image)

For the purpose of this research, inputs apply to the characteristics the individual brings to the workplace. The “inputs” construct was operationalized by four variables reported in the Florida School Indicators Report (2008): a measure of the percentage of classes taught by out-of-field teachers, the percentage of teachers with advanced degrees, teacher certification rates and the average years of experience for teachers within a school.

Processes refer to pedagogical development and practice in and outside of the classroom including the elements analyzed with the School Culture Survey. “Processes” refer to pedagogical development and practice in and outside of the classroom. Examples include the nature of collaboration with peers, administrator evaluations, and professional development activities. Aggregated at the school level, these variables form the heart of educational leadership (Leithwood, Jantzi, & Dart, 1990). The “process” construct was operationalized by variables obtained from Gruenert and Valentine’s (1998) School Culture Survey.
Outputs are the immediate and recurring indicators of students within a school and include attendance rates and suspension rates. The “outputs” construct was operationalized by both student absences and suspensions as reported by the annual Florida Department of Education’s Florida School Indicators Report. Specifically, student absence data reflected the percentage of a school’s population that was absent 21 or more days. Suspension data reflected the percentage of a school’s population suspended outside of school during the 180-day academic school year. This percentage utilized an unduplicated-headcount to ensure the same student was not counted twice.

Specifically, the performance framework data were examined to address the following research questions:

1) Is there an effect of school culture factors, as perceived by teachers, and characteristics of teacher quality on student attendance?

2) Is there an effect of school culture factors, as perceived by teachers, and characteristics of teacher quality on student suspension rates?

4. Methodology

As a quantitative study, the research utilized a statistical survey and statistical modeling perspective. The research methods utilized to collect data included the use of surveys, student outcome data, and teacher and school demographic data. Data were obtained from 50 schools in Florida representing significant diversity in terms of demographics, locations and school size.

4.1 Participants

Participants of this study were instructional faculty employed by 50 schools located in Florida. The total number of teachers participated was 1657 and the average response rate within each school was 66%. The demographic breakdown of the sample is discussed further. 71% of respondents identified as female and 29% as male. 51% were white (non-Hispanic), 18% African-American/Black, 3% Asian/Pacific Islanders, and a little less than 28% as Hispanic/Latino, American-Indian, or Multiracial.

4.2 Data Collection

To evaluate the culture within each school, the School Culture Survey (Gruenert & Valentine, 1998) was utilized (Appendix A). The data were collected at each school site via electronic distribution. Teachers were asked to complete the survey through an email link distributed by the school administration. Survey responses were anonymous and data were collected from all sites using an online survey tool. Participants were allowed one week to complete the survey and all responses were collected and analyzed within ten days.

4.3 Instrumentation

The School Culture Survey (Gruenert & Valentine, 1998) was the instrument for this study. It was employed to gauge the faculty of their individual perceptions of the school and organizational culture. The School Culture Survey evaluates the perceptions of school faculty (teachers, administrators, etc.) in relation to six unique factors related to school culture by asking participants to rate its 35 items on a 5-point Likert-type scale with 1 being “strongly disagree” and 5 being “strongly agree”. The six factors include professional development, the unity of purpose, collaborative leadership, teacher collaboration, collegial support, and learning partnership. The 35 items of the survey delineated each individual’s school culture. The parts of the instrument measuring each of the six factors have been established as reliable. Cronbach’s alpha was calculated to assure reliability as suggested by Muijs (2011). Cronbach’s alpha values were .910, .834, .821, .867, .796 for Collaborative Leadership factor; Teacher Collaboration factor, Professional Development factor, Collegial Support factor, Unity of purpose factor and the Learning Partnership factor respectfully.

The data from the School Culture Survey are essential to evaluate the current school culture as perceived by the faculty and to establish goals related to the specific needs revealed in the analysis. This instrument also affords the school community the opportunity to examine which elements of school culture may be directly impacting student achievement and teacher working conditions. For this particular research, the culture survey serves to examine the processes at the school level and their role influencing student outputs or outcomes.

With this, the independent variables for this study were six factors of school culture described above as well as characteristics of teacher quality (the percentage of classes taught by out-of-field teachers, the percentage of teachers with advanced degrees, teacher certification rates and the average years of experience for teachers within a school) while the dependent variables were student suspension rate and student attendance rate.
4.4 Data Analysis

Data were analyzed using correlational analysis, multiple linear regression and descriptive statistics. Analysis was performed using SPSS software package. First, correlational and multiple linear regression analysis were performed with the dependent variable as excessive student absences, quantified by 21 or more days absentee percentage within each school. The data was first checked for outliers; none were detected, thereby the sample size was maintained at 50 schools. Descriptive statistics were examined to determine the mean and standard deviation.

Then, to examine the relationships and predictive associations of the independent variables upon the second student outcome, correlational and regression analysis were performed with the dependent variable as out-of-school suspension percentage within a school. Descriptive statistics indicate the dispersion of scores and percentages for the dependent and independent variables. Pearson correlations were then used to determine the relationships between the independent variables with the student suspension percentages within a school as the dependent variables.

5. Results

5.1 Question 1: Student Attendance

The first research question asked if there were statistically significant predictive effect of school culture factors, as measured by the School Culture Survey (collaborative leadership, teacher collaboration, professional development, collegial support, unity of purpose and learning partnership), and the characteristics of teacher quality (the percentage of classes taught by out-of-field teachers, the percentage of teachers with advanced degrees, teacher certification rates and the average years of experience for teachers within a school) on student attendance.

Pearson correlations between students with 21 or more absences and the independent variables were utilized to demonstrate the relationships between the variables (The model summary determined the R (.564), the R square (.319), adjusted R square (.144), and the standard error of the estimate (4.156) with excessive absence percentage as the dependent variable. The analysis of variance revealed an F value of 1.823 with significance at .089 indicating that there were no significant predictive relationships between the dependent and independent variables.

5.2 Question 2: School Suspensions

The second research question asked if there were statistically significant predictive effect of school culture factors, as measured by the School Culture Survey (collaborative leadership, teacher collaboration, professional development, collegial support, unity of purpose and learning partnership), and the characteristics of teacher quality (the percentage of classes taught by out-of-field teachers, the percentage of teachers with advanced degrees, teacher certification rates and the average years of experience for teachers within a school) on school suspension.

The model summary determined the R (.786), the R square (.618), the adjusted R square (.520), and the standard error of the estimate (2.558). The analysis of variance displays the F of 6.311 with significance<.001. Multiple linear regression showed significant relationships between percentage of out-of-school suspensions and some of the independents variables. The variables that showed significance at this level were teacher collaboration (p=.041), out-of-field percentage (p<.001), and teachers without certification percentages (p=.001). These results demonstrate that of those variables that are significant, there are predictive associations between the independent and dependent variables. For example, for each one-point increase in the teacher collaboration factor from the school culture survey, the model predicted that school suspensions were observed to decrease by 6.709%. Furthermore, as the percentage of out-of-field teachers within a school increased by one percentage point, the model predicted that the percentage of students suspended out-of-school would decrease by 0.162%. Conversely, as the percentage of uncertified teachers within a school increased by one percentage point, the model predicted that the percentage of student suspensions would increase by .222%.

6. Discussion

Pearson correlations were utilized to indicate the strength of the linear relationship between and within the independent and dependent variables. The Pearson correlation data (Table 2) revealed no significant correlation between the first dependent variable (excessive absences) and the teacher quality characteristics and a significant negative correlational relationship between all school culture factors except for Teacher Collaboration. Pearson correlations were used for the second model with suspension percentages as the dependent variable, and showed
a positive correlation with all independent variables other than the years of teaching experience (not significant) and teachers without certification (.624, positive correlation). This data further demonstrated numerous significant correlations between teacher quality characteristics and school culture factors.

The performance framework model, using multiple regressions and correlations, predicted no significant associations between school culture, as perceived by teachers, teacher qualities and student absences. The student suspension outcome variable showed significant relations of three independent variables (teacher collaboration, out-of-field teacher percentage and teacher certification) and the number of out-of-school suspensions. The model predicted that as the teacher collaboration factor within the school culture survey increased, student suspensions would decrease by 6.709%. In addition, the model predicted that with each one-point incremental increase for the percentage of out-of-field teachers within a school, the observed number of suspensions would decrease by .162%. Then, as the percentage of non-certified teachers within a school increased, the model predicted that student suspensions would increase by .222%.

The first surprising detail emerging from the data was the fact that there were no correlational relationships between teacher quality characteristics and the excessive student absence variable. This calls into question the value of using that particular variable in determining student outcomes and ultimately, student achievement. Excessive absences, especially at the elementary level, may not be the most valuable measure of student achievement or student outcomes. Student attendance at this level may be influenced more by parental support rather than the practices and teacher qualities being exhibited at school. Student attendance may serve as a more valuable dependent variable when examining secondary schools.

Furthermore, the data found that the years of teaching experience failed to show significant correlational relationships for both dependent variables. This is important as it informs the research on the value of teacher merit rather than teacher longevity as a predictor of teacher quality. Teacher contracts and hiring practices have long been bound by years of experience, with teachers traditionally being paid, retained, and evaluated based upon this factor. Yet, if this factor has no significant relationship between student attendance and student suspension rates, can we begin to incorporate other methods to influence our teacher salary and retention methods? If variables such as certification and possessing advanced degrees influence student outcomes, then these factors should be taken into account when districts and school leaders recruit, hire, retain, and compensate teachers. The pay-for-performance model has been a topic of discussion in the literature in the last few years. Pay for performance is addressed by the recently passed Senate Bill 736 which prescribes salary incentives to be paid to highly effective and effective instructional employees, as determined by their evaluations.

The data also reinforces the contradictions that often emerge when analyzing the characteristics of teacher quality whereas an increase in the percentage of out-of-field teachers is associated with decreases suspensions while an increase in non-certified teachers is associated with an increase in suspensions. The analysis showed a positive correlation between the percentage of school’s non-certified teachers and a negative correlation with the percentage of out-of-field teachers. The data may have also been influenced by the fact that the sample population had a much lower percentage of non-certified and out-of-field staff. The contradictions in the study may support the notion that the elements of quality teaching that most directly impact student achievement may often be those most challenging to measure (Walsh & Hale, 2004).

Furthermore, the fact that there were no predictive associations between the school culture factors and the teacher quality characteristics may signify the importance of the school principal and the policies and procedures taking place within the school. For example, regardless of the background, educational attainment, or certification status of teachers, these factors may have limited influence upon the culture of the school. This supports the idea of collaboration between and among teachers, regardless of the “inputs” they bring with them. This lends hope to the notion that it matters more what is happening in the school rather than what certifications, degrees, or even experience teachers possess.

There were numerous positive correlations between school culture factors and teacher quality characteristics. Teachers with advanced degrees showed positive correlational relationships with Collegial Support, Unity of Purpose, and Professional Development. This may signify a teacher force with an increased likelihood of an understanding of the value of professional growth and sharing ideas and learning opportunities with colleagues. These data suggest the positive influence that may arise when teachers have or are in the process of pursuing advanced degrees. This may also augment the research supporting job-embedded advanced degrees as part of the learning opportunities afforded to teachers within the school.

In contrast there was a negative correlation between the percentage of teachers without certification and all but one of the school culture factors (teacher collaboration). Teachers without certifications are often mid-career
teachers, moving from other types of employment without formal training and often with a varying set of skills and expectations. The factors that make up a collaborative school culture such as collaborative leadership, collegial support, and embracing community partnerships may not be the norm in many fields such as business, finance, law and the military. District and school leaders should work to engage non-certified teachers to embrace and harness the skills that they do bring to the school communities. Yet, the non-certified teachers should be exposed to training and learning opportunities allowing them to understand the importance and put into practice working with a common goal, pursuing professional growth, having a shared vision, and calling upon colleagues and leaders for support and shared decision-making.

Finally, the data demonstrates the importance of school culture factors and their relationship to student outcomes. Peterson (2002) suggests that culture is built within a school over time as teachers, school leaders, parents and students work together and it is the school culture that often influences the staff development and professional growth that takes place within a school. Student outcomes are influenced when leaders work collaboratively, when teachers participate in professional growth and when the school community unites in a common vision. A school faculty that works collectively and collaboratively will be able to share knowledge, skills, and practices needed to reduce suspensions. Then, a collaborative school will be able to work with families and community members to communicate and unify to ensure students are attending, and more importantly, learning.

The results of multiple linear regressions suggested that teacher collaboration plays an important role in reducing the number of out-of-school suspensions. This finding is extremely important as it illustrates the significance of teacher collaboration in relation to student outcomes. When teachers work collectively and share in the collective education of children, they are better equipped to meet the needs of their students. For example, collaborating teachers across grade levels might share behavior management techniques, family history about a child, or even allow a teacher to send a misbehaving child to another room to diffuse a situation. Teacher collaboration may also enrich teacher-learning opportunities with peer mentoring and observation as well as thematic based integrated units between classroom and special subject teachers. These strategies may seem insignificant at the school level, but when examined across the sample population, the impact on practice in the state of Florida would be significant. A 6.709% decrease in the suspension rates predicted by the model, would result in nearly 13,000 less students being suspended annually within the sample of 50 schools (Florida School Indicators Report, 2015).

Teacher Collaboration examines the extent to which teachers engage in constructive dialogue and conversations that further the educational mission, vision and goals of the school. Ideally, teachers throughout a school will work collectively and collaboratively, enhancing teaching and learning through the use of such activities as mutual classroom observations, lesson modeling, grade-level and team planning, and evaluation and assessment of teaching practices (Bambino, 2002).

Another important finding of this study is increase in suspensions when the number of non-certified teachers is high. Although the data only reveals a small increase in suspensions, this predictive association is supported by Linda Darling-Hammond (2000), who stated that student achievement increased and dropout rates decreased when teachers were certified. In fact, Goldhaber and Brewer (2000) found that teacher certification had a strong influence upon student achievement in high school mathematics and science, above and beyond the effects of teachers’ subject matter degrees. The performance framework model further supports the importance of teacher certification, as it may contribute to increased student achievement through the decrease in suspensions (Ali & Dufresne, 2008; Railsback, 2004).

The analysis also revealed a decrease in suspensions when the percentage of out-of-field teachers in a school increased. While this increase is small, it does contradict the relevant research which suggests that those who have a major in the subjects they teach ("teaching in field") elicit increased student outcomes from their students than out-of-field teachers, controlling for student’s previous academic achievement and socioeconomic status (EducationWeek, 2004; Goldhaber & Brewer, 2000). Supporting the performance framework data is the research that suggests that out-of-field teachers may result in equal or even higher student test scores than their in-field teaching counterparts (Walsh, 2007; Wenglinsky, 2002). One possible explanation for this surprising result is the low percentage of out-of-field teachers within the sample population. The teacher demographic data shows that the sample population had 3.7% of educators within their schools teaching out-of-field while the state percentage was 8.20%. The state average is more than two-times the sample percentage and this may account for the significant negative predictive association between out-of-field teacher percentages and student suspension rates.
7. Conclusion
The role of school culture within this research may well have a lasting and wide-ranging influence on school improvement and school reform initiatives. Working collaboratively with school leadership and teachers to strengthen the culture of the school, with the intent of improving teaching practice and student learning, is a promising school reform strategy (Vescio, Ross, & Adams, 2007). It is the unique characteristics of school culture that were analyzed as part of this study that will enrich the future work of school reform initiatives.

Teacher collaboration emerged as a key school culture factor related to student outcomes. Furthermore, a decrease in suspensions would lead to a decrease in the negative behaviors associated with poor academic achievement (Railsback, 2004). We therefore recommend that schools are places where collaboration between teachers and administrators is encouraged and opportunities are provided throughout the school community and the school year for this collaboration to flourish. Shared data-driven decision-making, cross-grade and cross-curricular planning and job-embedded professional development are a few of the numerous strategies that would increase collaboration.

Further analysis of the data suggests that characteristics of teacher quality do not have a meaningful impact on student attendance and suspensions. This differs from the human capital perspective guiding the development of teachers, in that rather than focus on the personal development of the teacher’s individual skills and knowledge base (quantified by advanced degrees, highly qualified, etc.), the professional development and learning goals are school based and are catered to the unique school setting, student body, and needs of the collective school learning environment. Individual teacher quality is important, yet, lasting whole school improvement may be realized when focusing the reform efforts on the collective needs of the school community.

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