

**Consider the teachers: An analysis of factors
that influence student test results in Orange
County Schools**

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I. Abstract

This qualitative research examines what teachers, counselors, and principals from three elementary schools in Orange County Schools consider to be the most important factors that influence students' standardized test scores. By analyzing responses from eight interviews of representatives, this research concludes that teacher quality is the most important factor that influences North Carolina End of Grade test scores in Orange County. Of the four faculty members that considered teacher quality the primary influencer, each responded with a different defining factor for teacher quality. These factors include relationship building skills, instructional competency, classroom management skills, and teacher leadership. The second most important factor is family characteristics, which is broken up into race, socioeconomic status of parents, parental involvement, having a parental figure, and pressure from parents.

II. Introduction

The beach is a place for relaxing, building sandcastles, reading, and spending quality time with one's family and friends. An elementary school teacher in North Carolina took her students on a field trip to the beach to bring to life the material that they were studying in science and math. Her students were amazed. Many students had never been to the beach before; they had never seen a picture of the beach or ocean. They had never felt the sensation of sand slipping between one's fingers because they did not have the resources to go to the beach. The teacher related this story to illustrate that there is a large gap in experience for children of a lower economic status and of ethnic minorities.

To remedy this experience deficiency, she proposes to increase the amount of physical and virtual experiences and to also change testing policies. In her mind, teachers are required to conduct standardized tests far too often, making it difficult for educators to actually teach. Gearing education to the North Carolina End of Grade tests is both good and bad. There needs to be accountability for teachers, but these tests should not be the ultimate goal of all instruction. She believes that standardized test scores do not adequately reflect on teacher performance or on the quality of a school. If one wants to see real growth both academically and socially, observation and informal growth truly reveal it.

The story of this teacher's field trip is just one of countless anecdotes of OCS teachers and administrators. How do these stories, opinions, and experiences of OCS teachers and administrators relate to each other? Are there common themes between individuals of different schools? Rather than taking into account the teacher voice, scholarly research determines major factors that impact student achievement with quantitative analyses. Although a statistic may say that the socioeconomic status of parents is important, literature lacks stories similar to the North Carolinian teacher, stories about fathers beating sons, stories about heroic teachers. Answering the question of what factors influence student test scores is very important, and statistics do not show the whole story. One cannot get a full sense of the issue by tables and figures. This research paper aims to provide this qualitative perspective by answering the question: what do teachers, principals and counselors of three elementary schools in the Orange County Schools consider to be

the most important factors that influence students' standardized test results at their particular schools?

III. Factors that influence test scores, according to literature

Countless researchers have discovered a myriad of factors that influence student test performance with quantitative methodologies. Because of the high amount of literature about this topic, it was necessary to sort factors by order of importance. Not all researchers agree with the following breakdown, but it is the overall consensus. The most important factors affecting student achievement are background characteristics, like race, parental achievement levels, and family income (Coleman, 1966; Sutton, 1999; Goldhaber, 1999). After these factors, which are out the control of schools, are removed from discussion, teacher quality is the next most important factor to determine student performance (Strauss, 1986; Soled, 1994; Elliott, 1998).

Although standardized test scores of students are one piece of information for school leaders to use to make judgments about teacher effectiveness, teachers should not be penalized or rewarded because of student test scores alone. There are, however, quantitative and psychological studies that reveal direct connections between teacher quality and student performance. A 1% increase in teacher quality, as measured by test scores, leads to a 5% increase in the amount of public school students passing end of grade exams (Strauss, 1986). Teachers can improve their students' performance by changing their own teaching methods. When teachers decide to increase the emphasis on higher-level thinking in classroom instruction, students perform better on tests (Soled, 1994, 37). There are various components

that can be measured in teacher quality, like the relationship building studies. Multiple psychological studies confirm that there are benefits of teacher-student relationship building (Hughes, 2007; Hamre, 2001).

Other factors, like per-pupil expenditure, class size, and salaries for teachers play a part in the cause of inequality in test results as well. To start, equal salaries do not attract equally qualified teachers because teachers prefer school districts with higher socioeconomic statuses (Ferguson, 1991, 490). Also, class sizes surpassing twenty students per one teacher hurt scores (Ferguson, 1991). Per-pupil expenditures indirectly increase students' achievement by giving students access to educated, higher quality teachers (Elliott, 1998, 240). The solution to equalizing the public education system is to hire more educated teachers and train teachers to emphasize inquiry skills and to purchase science equipment in decent condition. Elliott's implications, however, are only in regard to math and science test results.

Parental involvement is positively correlated with student test performance (Griffith, 1996, 40). This correlation remained constant when average socioeconomic status and demographics of the school were controlled. However, after breaking down the term parental involvement into six different characteristics, parent-child communication, home supervision, educational aspiration for children, and school participation, no single subcategory has a statistically significant impact on test scores (Fan, 2001).

Although many factors influence how well students achieve on standardized tests, there are many decision-makers aside from teachers, who influence student performance, including administrators and school boards. When analyzing how

high school principals regard effective leadership, there are three leadership practices that meaningfully contribute to student achievement: positing a goal for achievement, addressing the diverse needs of student groups, and leading ethically (Young, 2007, 153). When comparing schools in which the boards of education were highly involved in decision making with schools that have more autonomy, students in schools with very involved boards scored over one point lower on standardized achievement tests (Peterson, 2000, 61).

These are only a few of the vast amount of studies about particular factors. There are so many contradictory viewpoints out there, so many statistical analyses and linear regressions, that it very easy to get lost in and bogged down by the numbers. All of these studies clutter the conversation, drowning out the opinions of the educators themselves. While all of this scholarly research is occurring in computer labs and universities, researchers have neglected an important voice, the teacher voice. In order to escape the many quantitative studies, this research aims to determine factors by asking those people administering the education first hand.

IV. Factors that influence test scores according to teachers, administrators

Research Design

This research relies on interviews that were conducted in person at the faculties' respective schools. I interviewed educators from three schools in Orange County. School C has a history of poor student achievement, and School A and School B have consistently performed above the district and state average.

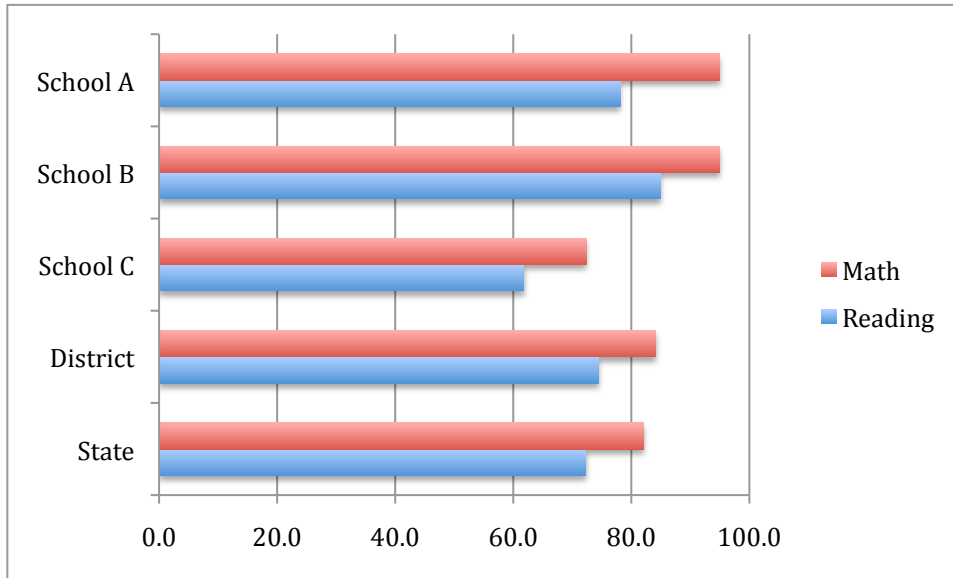
Although the students of these schools may have differing cultural and

socioeconomic demographics, I asked all of the interviewees the same set of questions.

Background on Orange County Schools

Orange County is positioned between the Research Triangle and Greensboro, and is the home to two school districts: Chapel Hill – Carrboro City Schools and Orange County Schools. The latter has 7 elementary schools, including one year-round school. All students in North Carolina take state mandated End of Grade Tests in math and reading. The three schools that the research focuses on were selected due to their test scores. As seen in Figure 1, Schools A and B perform above average in both reading and math, while School C performs below average compared to OCS. In order to maintain anonymity for the interviewees, the school names are left out, and both principals and counselors are called administrators.

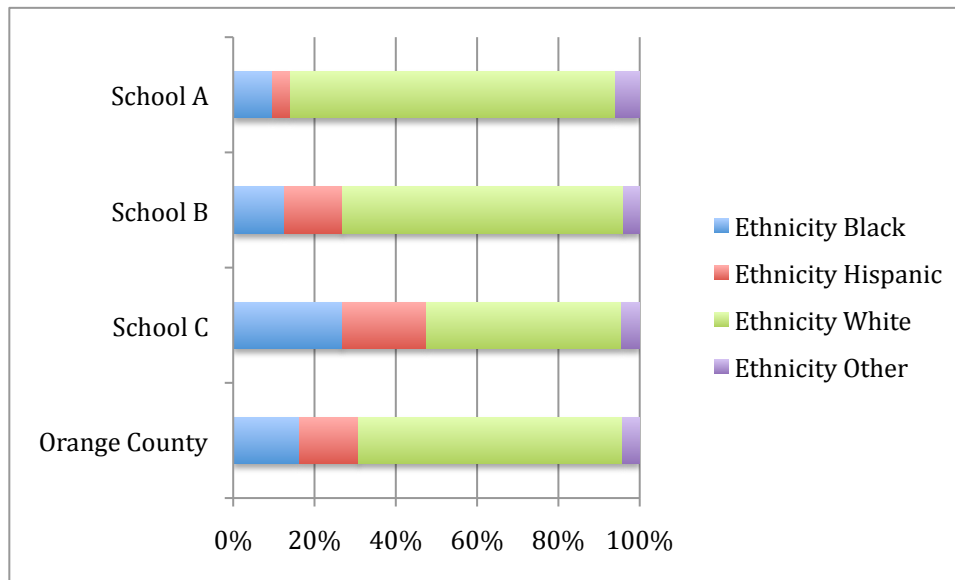
Figure 1. School Performance Breakdowns. The percentages of students' scores at or above grade level in the 2011-2012 school year.¹



School C is a Title I school. Schools that fall under this category have poverty rates above 40 percent, so they receive financial assistance from state educational agencies to aid in meeting student achievement levels mandated by the state. Also, Figure 2 illustrates that the black and Hispanic populations in School C surpass 40 percent. School A and School B have minority populations less than the average in all Orange County Schools.

¹ Data from: "NC School Report Cards." NC School Report Cards. Ncreportcards.org, 2012. Web. 1 Oct. 2013. <<http://www.ncreportcards.org/src/>>.

Figure 2. Ethnicity Breakdowns²



Interview Process

All interviews occurred during October and November 2013 in their respective schools. From School A, I interviewed an administrator; from School B, a teacher and two administrators; and from School C, 2 teachers and 2 administrators.³ All interviews contain six specific questions so that answers could be compared in the data analysis; however, there was not an overly rigid structure because it would have disrupted the flow of each interview (See Appendix for the full structure). In order to sort through the responses cohesively, the factors that teachers and administrators cited are sorted by most important, important, and other.

² Data from: "Orange County Schools." *Orange County Schools*. Orange.k12.nc.us, n.d. Web. 1 Oct. 2013. <<http://www.orange.k12.nc.us/district/data.html>>.

³ All interviews were recorded; further, proper IRB protocol and requirements were consistently followed during the planning and administering of these interviews.

Most Important Factors

Table 1: The most important factors that influence student test performance

	Teachers	Students	Parents	School
B teacher		x		
B admin.	x			
B admin.	x			
C admin.				x
C teacher 1	x			
C teacher 2			x	
C admin.			x	
A admin.	x			

“Teachers” includes responses of relationship building skills, instructional competency, classroom management skills, and teacher leadership. “Parents” includes responses of Race of parents and Parental Involvement. “Students” category refers to student work ethic. The “School” column refers to the breakdown in instructional processes in Kindergarten through 2nd grade.

Although literature points out that family background characteristics are the easily the most important factors, only 2 out of the 8 responses matched what the literature says. Every interviewee answered that Race/Family Income/Parental education does indeed play a role, but only 2 ranked it as most important. These 2 responses were both from C, but still the other 2 responses from C, where the impact of these factors is more negatively pronounced, being a Title 1 school, ranked teacher quality or instructional breakdown as the top influence. The principal of C believes that she does not believe that outside factors should be used as excuses; further, if a class performs well on End of Grade tests, the sole reason is because of the instructor.

There is a continuing debate between C’s principal and her teachers over the principal’s belief. The counselor and a teacher at School C strongly attest that, despite teachers’ best efforts, some students will not do well because of their parents. The teacher sees a distinct imbalance of experience between minority and white students. The counselor told tales of parental abuse, sexual assault from siblings, and much more. She emphasized that teachers were working as hard as they could, but when students have terrible home lives, there is little hope that they will do well on tests.

Important Factors

Table 2: Important factors that influence student test scores

	Teachers	Students	Parents	School
B teacher			x	
B admin.			x	
B admin.				x
C admin.	x			
C teacher 1				x
C teacher 2			x	
C admin.				x
A admin.			x	

For Table 2, the “Teachers” column references teacher style and attitude. The “Parents” column references parental involvement, having a parental figure, SES of the parents, and pressure from parents. The “School” column encompasses school funding, and the climate of the school, referring to the ability to create a singular focus that the leadership team is involved. Table 2 reveals that the teachers do in fact acknowledge the significant impact of family background.

Other Factors

Table 3: Other factors that influence student performance

	Teachers	Students	Parents	School
B teacher				
B admin.				x
B admin.			x	
C admin.			x	
C teacher 1			x	
C teacher 2				
C admin.				
A admin.				x

The “Parents” column includes SES and race, and the “School” column refers to having a full year calendar and the principal’s hiring the best possible staff. These factors were mentioned briefly during the interview; however, they have a substantially smaller impact than the most important and important factors from Tables 1 and 2.

IV. Analysis and Conclusions

The importance levels of factors brought up by these teachers does not fully align with what scholars have derived quantitatively. The most important factors according to literature are student background characteristics, like race and socioeconomic status. According to the teachers, the top influencer on student test performance is teacher quality. An administrator from School C often illustrates this point when arguing with her faculty about the determinates of success: when a class does well on End of Grade exams, it is not because of the characteristics of the students, rather it is solely a byproduct of a teacher’s instructional ability.

Teacher Quality

Half of the interviewees responded that teacher quality is the number one factor, yet their opinions about what determines teacher quality differ. Previous research about what makes good teachers indicates the following three abilities: always being committed to their students, having a deep understanding of the subject matter, and to tailor teaching strategies to their students' needs (Mitchell, 2001). Of the interviewees, each faculty member responded with a different defining factor for teacher quality: relationship building skills, instructional competency, classroom management skills, and teacher leadership.

Interviewees would talk about heroic efforts made by teachers who would not allow their students to give up, who would preach that failure is not an option. Although not every teacher possesses the perfect ability to make relationships with students, it is safe to say that the instructors in Orange County understand the importance because they have seen the miraculous effects of relationship building. Being eyewitness to superb relationship building caused the interviewees to hold high standards for themselves. Their first instinct is not to make excuses for themselves about students having tough backgrounds; rather, their initial reaction to poor test performance is, "How can we, the teachers, improve?" The answer to this question differs according to the four teachers that believe teacher quality is the most important factor.

Relationship building

In order to make a difference in a student's learning, the instructor has to make personal relationships with their students in the classroom. Specifically, the

chief way for students with behavioral problems to improve academically is with an instructor that makes a meaningful connection with that student. After building and maintaining relationships with students, they can target and eliminate problems. These relationship-builders do not take no for an answer, and they will not let their students fail. This ability to effectively establish healthy relationships with students is almost an innate ability. To foster meaningful connections, the good teachers let their students know how much they care about them and how much they want the students to succeed. Various psychology studies also attest to the benefits of teacher-student relationship building but do not revere it as crucial as other factors like race and SES (Hughes, 2007; Hamre, 2001).

Instructional competency

The administrator defined instructional competence as the ability to figure out where each individual student is and where that student needs to go. The great teachers can distinguish differences in student levels of their classrooms. At every school, there are teachers whose students always pass, and there are teachers whose students always perform well below average. The teachers that continually have students failing periodically ponder, “How are we supposed to get these students to succeed if their parents are never around?” The good teachers never ask that question; rather, they are always trying out different strategies to overcome obstacles. Again, this administrator insinuates that instructional competency cannot be learned. Some people are born to be good teachers.

Classroom management

The teacher's definition of classroom management encompasses relationship building, instructional competency, and creating the best environment to learn. When a teacher can build strong relationships with their students, they can better identify students who have trouble focusing, which is the biggest problem that teachers must address. After making deep connections with students and figuring out who has attention problems, the teacher can effectively establish an environment of rigor in which students have high expectations. Because of the relationships built with all the students individually, the students feel that the high expectation is attainable. Classroom management combines the previous two explanations in reference to teacher quality; moreover, the emphasis on maintaining the classroom's attention is the third pivotal aspect of teacher quality. Effective classroom management is the most systematic way to improve teacher quality. Although building relationships and identifying problems may be instinctive, this teacher's explanation of the biggest factor that influences test scores is the most complete.

Teacher leadership

The administrator at School A also believed that teachers had the biggest ability to impact scores, but not because of teacher-student relationship building. Instead, he adamantly believed that teacher leadership is the most important factors. One of School A's core tenants is that the best teachers are leaders inside and outside of the classroom. They take initiative to make themselves and everyone around them better. They talk vertically between grades teachers and are willing to

take workshops and go out and learn new things. Although attitude is important, being a lifelong learner is the key to being a leader. Need to stay up to date and keep things relevant. The need to have teacher leaders outside of the classroom has increased now that schools are no longer top-down administrations. Schools do not perform well because of lack of leadership throughout the school. School A annually does well on End of Grade exams because they are able to retain really good teachers. Really good teachers want to be around other really good teachers, and when surrounded by lazy faculty, exceptional leaders tend to leave to be around someone that pushes and challenges.

Family background characteristics

Behind teacher quality, the important factors that influence student test performance are individual and family background characteristics, which include race, socioeconomic status of parents, parental involvement, having a parental figure, and pressure from parents. According to researchers, race, socioeconomic status, and parental achievement are more important than any other factors, including teacher quality.

Race versus socioeconomic status

Only the representatives from School C mentioned race as a factor that influences test results. Minority students lack prior knowledge and experiences that white students are exposed to. The faculty disagrees on what is more important, race or SES. One member argues that having prior knowledge and exposure to different experiences is more important than parental income. Teachers can deal with kids not having breakfast. If a student needs a bath, the teacher can help.

However, minority students compared to white students, regardless of parental income, are not on an equal playing field. During field trips to the beach and Raleigh, North Carolina, minority students were amazed to feel sand and look at the ocean and to see such tall buildings, whereas their white peers did not share in such bewilderment. Although these field trips were beneficial, they do not bridge the experience gap. It is easier to learn faster and to achieve deeper understanding when one encountered more of the world.

On the other side of the argument, faculty members argue that SES plays a larger role than race. Poor kids fall behind big time. One administrator woefully remarked that School C is victim to the phenomenon that is typically found in literature: kids with wealthier parents achieve higher on standardized tests. Another faculty member from School C relied on the scores to figure out that socioeconomic status is more important than race. She said that African Americans with higher socioeconomic status perform better. Although there is disagreement about which is more important, all of these faculty members attest that both race and SES is important.

Parental Involvement

Representatives from all three schools said that parental involvement is important. The faculty from the same school gave very similar answers. School B representatives spoke about having a parental figure, having educated parents, and having parents with expectations. In one administrator's opinion, having any adult comparable to a parent is critical. It does not matter whether it be the student's actual parent or grandparent, or relative. Another administrator believed that

having literate parents is very beneficial. When a child comes to class on the first day of kindergarten and does not know the first letter of his name or colors, they begin education dramatically behind their peers. In order to catch up, they are required to learn at a faster rate, an occurrence that often leads to kids falling even further behind. And the third representative of School B considers having parents with educational expectations is crucial. Parents that care about whether their children finished their homework and come to parent teacher conferences have a very positive benefit on their children's test achievement.

The administrator of School A said that parents often cause the students to have too much anxiety going into the tests. Students would not think be anxious about End of Grade exams if their parents did not constantly pressure the students to do well. He also mentioned School A has students with parents that are working out of town on the weekends and the kids do not see them. Being 8 years old and not having a father to tuck a child in at night causes emotional distress, which affects test performance.

The teachers and counselors of School C similarly sited parental involvement but for very different reasons. One administrator told a story about a student whose mother left him, whose father beats him, and whose brother sexually assaults him. This student would often get less than two hours of sleep because of fear or because he was too hungry since his father would punish him by not giving him dinner. The counselor affirmed that situations like this were unfortunately common at School C. When students with this type of background come to school, there is little help that teachers can give.

Analyzing the differences between the ways that interviewees interpreted parental involvement among the three schools shows that parental involvement encompasses a wide range of topics. In literature parental involvement, which covers parent-child communication, home supervision, educational aspiration for children, and school participation, does not have a statistical impact on test scores when analyzing them quantitatively (Fan, 2001). When looking at the testimonies of these educators, one can get a strong sense that parental involvement does indeed impact students, regardless of which school they attend.

Other Factors

The majority of the remaining factors that interviewees mentioned were not discussed in detail. Interestingly, an administrator and teacher from School C said that the school is very well funded and that having more resources does not equate to achieving better scores. But another administrator from C described a continual struggle for limited resources. It is difficult to decide which side is truly correct. It is possible that the administrator and teacher that remarked the school had plenty of resources said this because they did not feel comfortable saying it in front of me. Another possibility is that the school resources are not distributed equally in all departments, so the faculty members of certain positions feel that there are plenty of resources to go around, while other positions may be constantly jockeying for more funds.

Although often written about in quantitative research, only one teacher briefly mentioned classroom size as a factor. The principal's ability to hire the best

candidates, student work ethic, having cohesive goals as a school, having a full-year calendar, and outdated teaching materials were also mentioned briefly.

Policy Implications for Orange County Schools and North Carolina

Because teachers and administrators of OCS believe that teachers are so influential in test scores, it is important that good teachers stay in the school district. However many faculty members mentioned that North Carolina did not adequately compensate its public school teachers. During the 2011 – 2012 school year, the average pay of North Carolina public school teachers was \$45,947, which makes these teachers the sixth lowest paid in the country.⁴ Despite this very low average in 2012, North Carolina education policy has made little improvement. The current state government is planning on improving the current compensation policy; however, the lack of bonuses for student improvements and no compensation for advanced degrees is causing major unrest amongst NC public school teachers.⁵ One interviewee expressed disgust at the current situation, stating that teachers are always getting treated like idiots in North Carolina by both the legislators and the media. Because of this mistreatment, teachers are leaving the state in droves.

The best course of action is to figure out which teachers are good teachers and then compensating them properly in order to dissuade them from leaving the county or state in search of higher pay. Using the factors derived from this research, it would be best to compensate OCS teachers who can manage a class well and can make meaningful relationships. These qualities are very difficult to measure,

⁴ "Rankings of the States 2012 and Estimates of School Statistics 2013." *NEA.org*. National Education Association, n.d. Web. 02 Dec. 2013.

⁵ Helms, Ann D. "NewsObserver.com." *N.C. Teacher Pay Stranded by Shifts in Education Laws*. News & Observer, 17 Aug. 2013. Web.

especially for state legislatures. The principal knows the most about the quality of her teachers, so they possibly would be the best people to decide which teachers receive annual bonuses or increased salaries.

Limitations and Further Research

This research is limited because of the small amount of interviews that were conducted. Not only were there 8 interviews, but also the interviewees only represent 3 of the 7 schools in Orange County. Another limitation is that the 3 schools were not evenly represented, with School A only having one spokesperson. The research could also be enhanced if it included parental achievement levels per school. Due to the small sample size, it is difficult to apply conclusions to other school districts. Further research includes interviewing faculty of another school district with dissimilar characteristics and compare with the answers from Orange County. Future researchers can run in-depth statistical analysis on all Orange County Schools, and subsequently interview the teachers and administrators of all 7 schools. Using these findings, one can compare what the statistics say with what the interviewees say.

IV. References

- Capraro, Mary Margaret, et al. "Examining Hispanic Student Mathematics Performance on High-Stakes Tests: An Examination of One Urban School District in Colorado." *The Urban Review* 42.3 (2010): 193-209. ProQuest. Web. 19 Apr. 2013.
- Coleman, James S. *Equality of Educational Opportunity*. Washington: U.S. Dept. of Health, Education, and Welfare, Office of Education; [for Sale by the Superintendent of Documents, U.S. Govt. Print. Off., 1966.
- Elliott, Marta. "School Finance and Opportunities to Learn: Does Money Well Spent Enhance Students' Achievement?" *Sociology of Education* 71.3 (1998): 223-45.
- Fan, Xitao, and Michael Chen. "Parental Involvement And Students' Academic Achievement: A Meta-Analysis." *Educational Psychology Review* 13.1 (2001): 1-22. *Academic Search Complete*. Web. 6 Dec. 2013.
- Ferguson, Ronald F., "Paying for Public Education: New Evidence on How and Why Money Matters." 28 *Harv. J. on Legis.* 465 (1991).
- Gamoran, Adam. "American Schooling and Educational Inequality: A Forecast for the 21st Century." *Sociology of Education* (2001): 135-53.
- Goldhaber, Daniel, and Dominic Brewer. "Teacher Licensing and Student Achievement." *Better Teachers, Better Schools*. Ed. Chester Finn and Marci Kanstoroom. Washington, D.C.: Thomas B. Fordham Institute, 1999. 83-102.

- Hamre, Bridget K., and Robert C. Pianta. "Early Teacher-Child Relationships and the Trajectory of Children's School Outcomes through Eighth Grade." *Child Development* 72.2 (2001): 625-38.
- Helms, Ann D. "NewsObserver.com." *N.C. Teacher Pay Stranded by Shifts in Education Laws*. News & Observer, 17 Aug. 2013. Web.
- Hughes, Jan, and Oi-man Kwok. "Influence of Student-teacher and Parent-teacher Relationships on Lower Achieving Readers' Engagement and Achievement in the Primary Grades." *Journal of Educational Psychology* 99.1 (2007): 39-51.
- Kayaardi-Hinojosa, Nihan. "The School Performance of Hispanic Students: A Generational Approach." Texas Woman's University, 2011. United States -- Texas: *ProQuest*. Web. 19 Apr. 2013.
- Mitchell, Karen Janice. *Testing Teacher Candidates: The Role of Licensure Tests in Improving Teacher Quality*. Washington, D.C.: National Academy, 2001. *Www.nap.edu*. The National Academies Press. Web.
- "NC School Report Cards." NC School Report Cards. *Ncreportcards.org*, 2012. Web. 1 Oct. 2013. <<http://www.ncreportcards.org/src/>>.
- "Orange County Schools." *Orange County Schools*. *Orange.k12.nc.us*, n.d. Web. 1 Oct. 2013. <<http://www.orange.k12.nc.us/district/data.html>>.
- Peterson, Steven. "BOARD OF EDUCATION INVOLVEMENT IN SCHOOL DECISIONS AND STUDENT ACHIEVEMENT." *Public Administration Quarterly* 24.1 (2000): 46-68.
- "Rankings of the States 2012 and Estimates of School Statistics 2013." *NEA.org*. National Education Association, n.d. Web. 02 Dec. 2013.

- Roscigno, Vincent J. "Family/School Inequality and African-American/Hispanic Achievement." *Social Problems* 47.2 (2000): 266-90.
- Soled, Suzanne Wegener. "What Affects Student Performance?" *The Science Teacher* 61.1 (1994): 34-7. ProQuest. Web. 19 Apr. 2013.
- Strauss, Robert P, Sawyer, Elizabeth A. "Some New Evidence on Teacher and Student Competencies." *Economics of Education Review* 5.1 (1986): 41-8. Web. 3 Dec. 2013.
- Sutton, Alice, and Irina Soderstrom. "Predicting Elementary and Secondary School Achievement With School-Related and Demographic Factors." *The Journal of Educational Research* 92.6 (1999): 330-38.
- Young, David Earle. "Effective Leadership Characteristics for Student Performance as Perceived by High-Performing Texas High School Principals: A Delphi Study." Texas A&M University, 2007. United States -- Texas: ProQuest. Web. 19 Apr. 2013.

Appendix:
Questions

1. How long have you been working here and what is your educational background? What positions have you held and what do you currently hold? Why did you become a teacher or get into education?
2. Do you think that standardized test scores adequately reflect on teacher performance or on the quality of a school in general? In other words, do you think that this statement is correct: the better the teacher is, the better students will do on standardized tests?
 - a. If not, then what other factors influence test results?
 - b. What role do decision-makers play in affecting student test results?
 - c. What role does differing characteristics of schools play—like racial differences and average socioeconomic status of students?
3. Of all of these factors we have discussed, what do you think is the most important factor that will influence student performance?
 - a. Can you give an example of a situation in which this factor was beneficial?
 - b. Was there a time when this factor hindered a student's performance?

I would like to be clear that I will not include any details that could lead someone to recognize an individual student.
4. What do you think are the biggest factors that influence student test results in Orange County Schools as a whole?
 - a. Of these, what is the single biggest factor?

5. How can your school improve? Are these improvements internal or do they require public policy or government assistance?
6. Do you have anything you would like to add that we have not talked about?