Cultural Capital and its Relationship to Academic Achievement: The Case of Shelby County High Schools

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Abstract

Research has found a positive relationship between possession of capital and academic achievement. Cultural capital is the access to cultural resources and activities as well as familiarity with and knowledge of the dominant culture. We looked at the relationship between cultural capital and academic achievement in Shelby County high schools. Shelby County, which contains Memphis and the surrounding municipalities, is one of the poorest metropolitan areas in the United States and experiences one of the largest achievement gaps in the country. We found that cultural capital and AP courses were positively correlated with all measures of achievement. Cultural Capital and AP courses predicted ACT scores while only AP courses predicted most TCAP scores. Technology negatively predicted ACT scores. We discuss the implications of these findings for the importance of creating more cultural capital in the educational system.

Keywords: *capital, cultural capital, education, Shelby County, achievement gap*

Introduction

Research has found a positive relationship between possession of capital and academic achievement (Sullivan, 2001; De Graaf, De Graaf, & Kraaykamp, 2000; Sullivan 2002; DiMaggio, 1982; DiMaggio & Mohr, 1985). It is well known that

students with financial capital have higher academic achievement and attain higher levels of education than students without these resources (Walker, Greenwood, Hart & Carta, 1994; Bourdieu, 1979; 1977; Miksza, 2007; Roscigno & Ainsworth-Darnell, 1999). Financial capital refers to the economic resources and tangible assets that a person possesses (Bourdieu, 1979; 1977). The possession of greater financial resources gives one the ability to more easily acquire other types of capital.

There are several types of capital other than financial capital. Human capital refers to the skills and capabilities a person acquires through education or work experience. Social capital is the relationships individuals develop through social networks and groups. Cultural capital is access to cultural resources and activities as well as familiarity with and knowledge of the dominant culture (Bourdieu, 1979; 1977). This includes knowledge and proficiency of the formalized language, involvement in creative arts (such as music, art, and literary expression), access to libraries and reading materials and access to and knowledge of technology (Bourdieu, 1989; Miksza, 2007; Miksza, 2010; Southgate & Roscigno, 2009 Brown, Bennedett, Armistead, 2010; Soltani, 2011; Luftig, 2000).

Purpose of Research

The Greater Memphis area, which includes a number of surrounding towns and municipalities, is one of the poorest urban areas in the United States (Delavega, 2013). It suffers from many inequalities, including socioeconomic and racial inequalities, which have produced significant disparities in educational achievement. It is hard to imagine that the disparities will suddenly disappear but there may be ways that the educational

system can help reduce them. The relationship between cultural capital and educational achievement is promising because it suggests that increasing these forms of cultural capital in the education system can help reduce the educational disparities.

The current research focuses on the relationship between cultural capital in high schools and educational achievement in Shelby County. The relationship between cultural capital in schools and educational achievement is one that has not been studied previously. All of the previous literature on cultural capital and achievement has looked at cultural capital in home or from the family. The current research examines this relationship because we believe that cultural capital in school is essential for children who come from environments with inadequate cultural resources and limited cultural capital exposure. The existence of cultural capital in schools allows these students to gain the benefits of cultural capital despite these cultural deficiencies and may reduce the disparities that result from unequal levels of capital.

Through this research, we hope to provide a comprehensive view of the cultural capital in Shelby County Schools, demonstrate the importance of cultural capital in the educational system and offer suggestions for how many schools in Memphis could reevaluate and revamp their cultural capital investment. We hypothesize that the schools with greater amount of cultural capital will have higher achievement in terms of ACT and other standardized test scores. We also hypothesize that schools with greater cultural capital will have higher attendance rates, higher graduation rates and lower dropout rates.

The importance of cultural capital

There are several reasons why helping students accrue cultural capital is vitally

important to success in the education system. Cultural capital aids in the development of skills and competencies that aid in creative thinking and imagination (Luftig (2000). Children enrolled in preschools with an abundance of culture capital have been found to have more school readiness skills (including vocabulary, art and music skills) than those in regular preschools (Brown, Bennedett, & Armistead, 2010). Additionally, cultural capital activities, such as access to reading, helps to expand vocabularies (Soltani, 2011).

The educational system assumes the possession of cultural capital. Bourdieu was one of the first to focus on the role of capital in the perpetuation of academic inequalities. He acknowledged that cultural capital helped to maintain social class distinctions through education (Bourdieu, 1979). Social class is maintained through education because those in higher social classes have parents with more cultural resources and greater amounts of cultural knowledge that those in other social classes (Bourdieu, 1977). Bourdieu claims that culture is reproduced and passed down from parents to offspring and, because the educational system assumes this cultural capital, those of higher classes who have the most cultural capital do the best in school (Bourdieu, 1977). The greater amounts of cultural capital possessed by higher socioeconomic status (SES) parents is assumed to be the result of financial capital, most often stemming from the parents' higher educational attainment and more lucrative employment options.

One example is linguistic capital which is a type of cultural capital. Linguistic capital is derived from knowledge of the dominant, formalized language (e.g. Standard American English which is taught in schools and is the language of business and professional communication) and how to use it (Bourdieu, 1989). This includes knowing specific language to use and appropriateness of said language in different settings as well

as possessing the vocabulary to effectively convey one's ideas. Children typically learn language before they begin school so the language spoken at home is generally the language that they learn. In the U.S., Standard American English (SAE) is taught and used in schools. Those who learn SAE at an early age have an advantage over children who learn another dialect, such as African American Vernacular English (AAVE) (sometimes referred to as Ebonics by non-linguistics) in the home. The benefits of possessing language of the dominant culture are evident because the material taught in school is written in the same language. Although a handful of schools in other cities have elected to adopt dialects other than SAE, the majority of the instruction in Memphis employs SAE. Thus students who enter the system already speaking SAE have an advantage over those who do not. Additionally, those who know how to use language can maximize the benefits from their interactions with authority figures and other people who may serve as potential resources (Bourdieu, 1989).

Cultural capital can also be viewed as an asset that allows individuals in lower SES brackets to gain upward social mobility. This acquisition of cultural capital is at the heart of social mobility theory. Cultural capital is a catalyst for social mobility. DiMggio & Mohr (1985) examined the impact of status culture participation (i.e. interest in and experience with cultural capital resources) on educational attainment and marital selection. Cultural capital was calculated by the self reports of participants ratings how often they engaged in cultural activities, their belief in statements assessing cultural attitudes and their scores on a literature, music and art test assessing cultural knowledge. Cultural capital was strongly correlated with educational achievement and college attendance. Students with more cultural capital discussed future plans with teachers and

other authorities more frequently. Cultural capital was found to be a significant positive predictor of spousal educational achievement. This suggest that marital matches are influenced by cultural similarity and thus if one has more cultural capital it will increase their change of marrying someone of a higher social strata. This demonstrates that cultural capital does aid in social mobility through its relationship to educational achievement, marital selection and aiding in more comfortable more effective and communication with others about future plans (DiMaggio & Mohr, 1985).

Previous Cultural Capital Studies

There is a substantial amount of literature showing the positive relationship between overall cultural capital and educational achievement in children (De Graaf, De Graaf, & Kraaykamp, 2000; Sullivan 2001; DiMaggio, 1982; DiMaggio & Mohr, 1985; Khodadady & Mokhtary, 2013; Wells, 2008;). Khodadady and Mokhtary (2013) looked at the relationship between cultural capital and several factors. Cultural capital was determined by the student's ratings of statements on the Persian cultural capital scale indicating how often they performed certain cultural activities. Cultural capital was compared to nine factors: artistic appreciation, cultural investment, cultural visits, cultural commitment, cultural curiosity, cultured family, literate family, religious commitment and higher education. Cultural capital was significantly correlated to all nine factors (Khodadady & Mokhtary, 2013).

Wells (2008) examined how cultural capital affected student persistence form the first to second year of college in community colleges and four year institutions. Cultural capital was determined by parent education, parent and student educational expectations,

importance of college to high school friends, how many friend had expectations to attend college, the school attended, family resources and parental involvement in the student's education. Wells found that the cultural capital variables that predicted student persistence were family resources, importance of college to others, and expectations of college. DiMaggio (1982) looked at how student's cultural capital impacted their grades. Cultural capital was determined by student's self-reports of their familiarity and appreciation of music, art and literature and scores on a test examining their knowledge of these three cultural forms. DiMaggio found that even controlling for family SES, there was a strong relationship between cultural capital and high school students' grades (DiMaggio, 1982).

Cultural capital is comprised of two main categories, (1) private possession and consumption of cultural knowledge and (2) formal participation in cultural activities (Sullivan, 2001; De Graaf et al., 2000). Private cultural consumption involves activities such as reading, painting, singing, learning about music, etc. Participation in formal cultural activities refers to such activities as visiting museums, concerts, art galleries, etc. De Graaf et al. (2000) looked at two types of parental cultural capital, reading habits and formalized cultural participation, to determine which affected student achievement the most. Cultural capital from reading was assessed by the number and types of books the parents read. Formalized cultural participation was determined by the number of times they visited museums, theatrical performances and musical concerts or symphonies in a year. They found that parental reading habits were a significantly greater predictor of children's achievement than parent's participation in formalized cultural activities. This may be true because private cultural consumption develops the skills that enable one to

increase cultural capital and achieve positive academic outcomes whereas participation in formal cultural activities only exposes one to the activities and values that are important to one's class (De Graaf et al., 2000). Sullivan (2001) examined the relationship between high school student's formal and informal cultural capital in the home environment and their educational achievement and cultural knowledge. Cultural capital was calculated based on the student's cultural activities such as reading, television watching, formal participation, etc. She found that student's informal cultural participation (such as reading and watching TV) was the most significant predictor of vocabulary scores, cultural knowledge and achievement on standardized tests. Again, this demonstrates that private consumption of cultural capital, such as reading, develops the set of competencies and skills that help children perform better in the academic setting (Sullivan, 2001). It can be assumed that these activities would be just as beneficial in the educational setting and the results of these studies suggest that consumption of cultural capital in schools, such as reading, writing or learning about the arts, may have a greater effect on student achievement than taking field trips and participating in other formalized activities.

Tramonte and Willms (2010) conceptualized cultural capital to be either static or dynamic. Static cultural capital refers to formalized cultural participation and cultural practices such as attending symphonies, museums or reading literature or learning about music on the computer. Dynamic cultural capital is the interaction and communication between children and their caregivers. They examined the relationship between these two types of capital and the student's literacy, sense of belonging at school and aspirations. Static cultural capital was calculated from student's responses to questions

about their parents cultural consumptions and possessions. Dynamic cultural capital was calculated from student's responses to questions about cultural exchanges, communication and elaboration of cultural experiences with their parents. Parent's dynamic cultural capital was found to have a stronger effect on student's literacy and aspirations than static cultural capital. This implies that parent cultural capital is imparted mainly through parent-children interactions whereby they teach these practices and communicate their preferences and values (Tramonte & Willms, 2010). This suggests that the interactions between teachers and students may have an impact on the cultural capital conveyed to students within the educational setting.

Edgerton and Roberts (2014) identified the cultural capital of dispositions, which is the symbolic value of certain skills, knowledge, and attitudes from communication or other verbal exchanges (2014). These exchanges create knowledge and develop dispositions that serve as capital in particular fields (Edgerton & Roberts, 2014). Bourdieu referred to these dispositions, values and attitudes as "habitus" (1977). One's habitus is highly influenced by one's social class and a major part of the dominant social class habitus is a positive view of education (Sullivan, 2002). The habitus of the upper socioeconomic classes is ingrained into the educational system and is a form of cultural capital. Bourdieu describes the upper class habitus as the belief that quality education requires an investment of time, effort and money in order to conserve and increase one's children's cultural capital (Bourdieu, 1977). Habitus is a type of cultural capital.

Lareau (1987) looked at parental dynamic cultural capital in education in the form of parental involvement. Cultural capital was defined as the amount of parental involvement in the schools and the qualities of the interaction between the teachers and

parents. Parental involvement was seen as a direct reflection of the values and attitudes, or habitus that the parents communicated to their children about education. The parents that were more involved were assumed to place a higher value on education than less involved parents. Parents of higher social classes were found to be more involved in their children's education. Teachers and administrators also viewed parents who were more involved as valuing education more than parents who were less involved. This suggests that the educational system rewards these attitudes and values through teacher approval and recognition of student improvement. Increased parental involvement in education demonstrates to children that education is valued and should be given priority over other activities. This implies policies that encourage parental involvement may increase children's cultural capital more than schools that do not. Having parents more involved in their children's schooling, demonstrates to students that education is important and should be valued (reword).

Gaddis (2013) expanded upon this by examining how student's habitus mediated the relationship between cultural capital and educational achievement. Habitus was defined as beliefs in self-efficacy (that one could succeed in school) and that education was essential to their success in life. Cultural capital was calculated by the number of times the student's participated in formalized activities in the previous year and the number of hours per week they were involved in cultural lessons (piano, ballet, etc.) or reading. The relationship between cultural capital and student's GPA was completely mediated by habitus (Gaddis, 2013). The results support the notion that cultural capital becomes useful in the educational setting only if one possesses a certain type of disposition about education. This is consistent with the observations of Edgerton and

Roberts (2014) regarding the value of certain attitudes, specifically the belief in and value of school success. These internalized opinions about education are usually communicated from parents to children and values that are consistent with the educational system are the ones that are rewarded. Although values are most commonly communicated in the home environment, these values can also be communicated in the educational environment as well. For example, AP courses instill the values, attitudes and behaviors that are essential for college. The values are not explicitly taught but are demonstrated through the course and teacher expectations, the college level course load and the independent learning approach commonly employed by the instructors.

The common themes throughout all these studies are parents and the home environment. The cultural resources in the home environments and the habits and dispositions that parents display have a large impact on children. This is unsurprising as the home environment is the initial place of learning for children. One of the best ways children learn is by mimicking the people they are around, i.e. their parents or caretakers (Bandura, 1971; Nielson, 2006). The activities and behaviors the parents and caretakers engage in are most likely the activities the children will try to imitate. What if the parents or caretakers don't engage in cultural activities? How do those children acquire cultural capital? For these children, we would argue, cultural capital is acquired in school

Beyond the cultural capital in the home, there is a substantial amount of literature on the relationships between individual types of cultural capital and their relationship to achievement. For example, music participation has been correlated with educational achievement (Miksza, 2007; Miksza, 2010; Southgate & Roscigno, 2009; Brown, Bennedett, armistead, 2010). A longitudinal study conducted on high school students

found participation in musical activities, such as band, orchestra and choir, was correlated with higher achievement on standardized tests in math, science, social studies and reading (Miksza, 2007). Miksza (2010) found that music participation was correlated with achievement in suburban, urban and rural schools, even when controlling for school type and individual level variables such as urbanicity, number of music teachers, SES, minority status, and peer influence. (Miksza, 2010). Both inside and outside school, music participation has been found to be related to achievement, even when previous achievement has been accounted for (Southgate & Roscigno, 2009).

Other researchers have examined how participation in the creative arts affects educational outcomes. Luftig (2000) compared children in an arts infusion program to those in normal educational programs. He found that those in the enriched arts program exhibited more creative thinking (measured as….), had more appreciation for the arts and had higher reading scores than those in normal programs. Similarly, Brown, Bennedett, Armistead (2010) found that children from lower SES backgrounds who were enrolled in enriched arts preschools had substantially more school readiness skills (including vocabulary, art and music skills) than those in regular preschools. Reading has also been found to positively influence vocabulary. Soltani (2011) found that students who read extensively improved their vocabulary substantially more than students who read moderately or not at all.

Having access to the Internet is also viewed as a form of cultural capital. The Internet access enhances existing cultural capital as well as increases social capital and human capital by enabling exposure to cultural commodities such as art, news, and music. Not only can individuals with Internet access learn more about their own culture,

the can also learn about other cultures. Social capital increases from the ease and efficiency of communication fostered by social networks, email, Skype and other sites that connect people based on shared interests rather than shared demographics. This electronic social capital then increases real life social capital (Hampton & Wellman, 2009 as cited by DiMaggio et al., 2001). Human capital increases because it allows people to cultivate and increase their skills in effectively using technology and in other domains from the information available on the Internet (DiMaggio, Hargaittai, Neuman, & Robinson, 2001). To make the most of the Internet, one needs to have the knowledge and understanding of it to utilize it to its fullest potential. This knowledge can be interpreted as another form of both cultural and human capital because it requires one to have the skills to use the computer as well as the knowledge to discern which sources of information are reliable.

Consistent with DiMaggio, previous research has found that knowledge of how to use cultural capital is just as important as the possession of such capital. Lareau and Horvat (1999) studied parental interactions in classrooms. Cultural capital was defined as the parental interactions based on interviews with the student's parents and educators. They distinguished between the possession and the successful use of capital, acknowledging that capital is only as valuable as its utilization in a specific situation. Their main focus was on the interactions between white middle class parents and black middle class parents. Both possessed cultural capital but the white parents used this cultural capital in a way that enhanced their relationships and communication with the teachers. The black parents did not use their capital in the same way and thus the interactions and relations they had with their children's teacher were not as advantageous

as those experienced by the white parents. They concluded that while individuals may possess capital, it was of little use to them within the educational system if it was not used in the most "appropriate" way. Knowledge of appropriate usage is equally as important as possession (Lareau & Horvat, 1999).

In the current research we look at the cultural capital in high schools. Previous research has found that students with more cultural capital in high school are more persistent in their educational careers, attain higher GPA's and standardized test scores, are more likely to discuss future plans with counselors and teachers, are more likely to attend college and have higher college attainment than students with less cultural capital (DiMaggio & Mohr, 1985; Wells, 2008; Khodadady & Mokhtary, 2013). As discussed previously, parents and the home environment play a substantial role in children's acquisition of cultural capital. However, we believe that schools also contribute greatly to the cultural capital acquired by their students, especially students who lack cultural capital in their home environment. Between the ages of five and eighteen, students spend a significant amount of time in schools (Funk, Sedman, Beals, & Fountain, 1998). This is particularly true in high school. We chose to examine high schools because of what we believe to be gross cultural capital inequalities in Shelby County Schools, specifically, cultural capital that contributes to positive learning outcomes.

The State of Affairs in Shelby County Schools

Over the last fifteen years, Memphis experienced one of the largest "achievement gaps" in the country, with the inner city, primarily African American schools performing much worse than the white suburban schools in the surrounding suburbs (Pohlmann,

2008). Current research shows similar trends (Tennessee Department of Education, 2014; see Figure 1 and Figure 2 in the Appendix). The suburban Shelby County schools are comprised of students of significantly higher socioeconomic status than those in the inner city (Tennessee Department of Education, 2014). Likewise, students in suburban Shelby County schools achieve significantly higher scores on all academic measures. These vast differences are the result of a number of historical, socioeconomic and cultural factors.

Historically, Shelby County Schools have experienced several changes since the onset of desegregation, which began in Memphis in 1961 (Pohlmann, 2008). The first measure was to redraw school district lines to increase diversity within schools. The focus was to eliminate "virtual one race schools" in which the dominant race comprised more than 90% of the school population (Pohlmann, 2008). In 1971, the Supreme Court decided that it was necessary to implement more stringent methods to ensure that desegregation occurred. These more stringent methods took the form of court ordered bussing.

The first Memphis bussing plan, Plan A, was implemented in 1972 by the federal district court (Pohlmann, 2008). Although it only involved busing in half of the schools (approximately 12,700 students bussed), it encountered significant opposition. The school board thought there was too much bussing and the NAACP thought the measures were not substantial enough (Pohlmann, 2008). On the first day of the court ordered bussing only about half of the students who were to be bussed showed up. Most of these students were African-American (Pohlmann, 2008). Plan A was seriously compromised by the national oil crisis in 1973 and the city of Memphis withholding funds from the school board for the buses.

Plan Z was implemented in 1973. This plan involved bussing almost 40,000 students and redistricting students in primarily black schools (Pohlmann, 2008). During this time, massive amounts of white flight occurred. Many whites fled the city to the surrounding suburban areas. This was motivated by newer and better schools in the suburbs, higher availability of mortgage loans, fear of court ordered bussing and fear that crime would increase in the city due to racial invasion (Pohlmann, 2008). Whites who didn't flee to the suburbs chose to send their children to private schools, completely circumventing desegregated schools and court ordered bussing. During this time, the number of private schools increased to nearly to one hundred schools and private school enrollment nearly doubled (Pohlmann, 2008). By 1978, forty-thousand white students had left Memphis City public schools (Pohlmann, 2008).

White flight had a significant social and economic impact. The majority of students that remained in the Memphis city public schools were not only black but were of a significantly lower socioeconomic status. In 1971, less than 40% of students qualified for free or reduced school lunches whereas in 2000, approximately 75% qualified for these subsidies (Pohlmann, 2008). Eligibility for subsidized meals occurs when a family's income falls below the federal government's "poverty line". This implies that the percentage of students in Memphis City schools living in poverty has increased substantially.

Over the last 30 years, Shelby County Schools have had more qualified teachers, lower teacher turnover rates, smaller student to teacher ratios, higher attendance rates and less student failures (Pohlmann, 2008). The Memphis City schools had significantly more inexperienced teachers and experienced higher rates of failure (Pohlmann, 2008).

The desegregation plans and policies of the 70's had largely failed and had actually resulted in a larger amount of segregation within communities and schools. This "de facto" segregation was a direct result of the residential patterns of white flight rather than mandates by law (Pohlmann, 2008). Segregation continues to this day in Memphis along with the associated inequalities in socioeconomic status and educational achievement.

Until 2011, Shelby County contained two school districts: Shelby County Schools (SCS) and Memphis City Schools (MCS). These two districts differed vastly in racial and socioeconomic composition, as well as in student performance. SCS students were predominately white, of higher socioeconomic status and scored routinely higher on standardized tests, state exams, and the American College Testing (ACT) test than students in MCS (Pohlmann, 2008). County property taxes were used to fund both districts, despite the fact that the majority of these taxes coming from the suburbs surrounding the city of Memphis.

In 2012 one of the largest mergers in educational history took place in Shelby County. In 2010 the Republican Party won the majority in the Tennessee State Senate (Locker, 2010). Already controlling the House of Representatives and the Governor's seat, the Republican's now had full control over the Tennessee Legislature. SCS wanted to petition for "special school district status", which would permanently separate them from the MCS, allow them to retain all of their taxes within their own school district and prevent any future consolidation of the two school districts (Locker, 2010; Silence, 2010).

This would have had disastrous effects on the Memphis City Schools. In 2008 a report conducted by researchers at The University of Memphis showed what deleterious

effects “special school district status” would have on all the schools within Shelby County. Granting of the special school district status meant that the two districts would only use the property taxes from their respective territories (Redding, Menifield, & Santo, 2008). The SCS, which contains only one fourth of all the students in Shelby County, would generate fifty to sixty thousand more dollars per student than the Memphis city school district (Redding et al., 2008). Since the students in the MCS scored significantly worse on educational measures and were significantly poorer than those in the SCS, if special district status was obtained, the students who needed the most funding would be denied it and the likely results would be immediate and devastating to MCS. In addition, if the special school district status was approved, school district boundaries would be permanently frozen, resulting in irreversible funding discrepancies (Silence, 2010). For that reason, in 2012 the MCS surrendered its charter and forced SCS to absorb the larger school district, preventing any hopes of a special school district status. Despite this merger, large discrepancies in academic achievement are still prevalent within Shelby County, particularly in schools that were formerly MCS (Tennessee Department of Education, 2014).

Method

Subjects and Design

Thirty-nine federally funded high schools from Shelby County were included in this study. A few schools from the sample were public charter schools (n = 2) and the rest were regular public schools (n = 37). Several variables, both directly and indirectly

related to cultural capital and achievement, were computed for each school. Correlations were computed to determine the magnitude and direction of the relationship.

Cultural Capital Variables

An analysis was conducted to assess the cultural capital in each school based on the activities and courses listed on the school's website. The amount of cultural capital for each school was determined based on the number of creative arts, music, language, technology and writing and reading programs offered by each school. In addition, other cultural activities such as Debate, Model United Nations, Mock Trial, etc., were included. A cultural capital index for each school was calculated by computing the total number of courses and activities in all cultural capital categories. Technology courses and programs were admitted from the cultural capital index for reasons provided below.

Achievement Variables

Two types of achievement data were collected: ACT scores and Tennessee Comprehensive Assessment Program (TCAP) scores. ACT scores were used as a primary measure of each high school's overall achievement and student's college readiness. This data was collected from the 2013 Tennessee State Report Card and included individual section scores (Reading, English, Math, Science). The analysis looked at the data for the year 2013 and the three year rolling average (2011-2013) for both the individual and composite scores. TCAP scores were the second measure of achievement. The score for each high school was based on the percentage of students who scored proficient or

advanced on each of the TCAP subject tests. These data were obtained from the online 2013 Tennessee State Report Card.

Other Variables

The percentage of the students who qualified for free or reduced lunches was collected from the 2013 Tennessee State report card. This was used as a measure of the school's overall socioeconomic status. The attendance rates, dropout rates and graduation rates were also collected from the 2013 Tennessee State report card. Advanced Placement (AP) classes were used as a measure of college preparation. The number of AP classes for each high school was determined from the course information available on each high school's website.

Results

A series of Pearson *r* correlation coefficients were computed for the cultural capital and achievement variables. The results of these analysis indicated that cultural capital and the total number of AP courses are positively correlated with all achievement measures. The results are provided in Table 1.

Table 1: Correlations between Cultural Capital and AP Courses and the other achievement variables.

	Cultural Capital		AP Courses	
Achievement Variables	Correlation	Significance	Correlation	Significance
ACT1 Average	.743	$p < .001$*	.803	$p < .001$*
ACT1 English	.742	$p < .001$*	.796	$p < .001$*
ACT1 Math	.728	$p < .001$*	.809	$p < .001$*
ACT1 Reading	.715	$p < .001$*	.771	$p < .001$*

ACT1 Science	.752	$p < .001$*	.809	$p < .001$*
ACT3 Average	.748	$p < .001$*	.811	$p < .001$*
ACT3 English	.718	$p < .001$*	.780	$p < .001$*
ACT3 Math	.743	$p < .001$*	.825	$p < .001$*
ACT3 Reading	.751	$p < .001$*	.806	$p < .001$*
ACT3 Science	.755	$p < .001$*	.819	$p < .001$*
Attendance Rate	.417	$p < .01$*	.370	$p < .05$*
Graduation Rate	.516	$p < .001$*	.536	$p < .001$*
Dropout Rate	-.349	$p < .05$*	-.457	$p < .005$*
Percentage of Free or Reduced Lunches	-.763	$p < .001$*	-.811	$p < .001$*
APs	.859	$p < .001$*	-	-
TCAP Algebra1	.731	$p < .001$*	.793	$p < .001$*
TCAP Algebra2	.724	$p < .001$*	.865	$p < .001$*
TCAP Biology	.655	$p < .001$*	.689	$p < .001$*
TCAP English1	.765	$p < .001$*	.746	$p < .001$*
TCAP English2	.701	$p < .001$*	.726	$p < .001$*
TCAP English3	.672	$p < .001$*	.749	$p < .001$*
TCAP US History	.495	$p < .005$*	.390	$p < .05$*

*Indicates statistical significance

Pearson *r* correlations were also computed to determine which aspects of cultural capital were related to ACT scores. ACT averages, both for the one year average (ACT1) and the three year average (ACT3), were significantly correlated with all measures of cultural capital except technology. These data are depicted in Table 2.

Table 2: Correlations between ACT composite scores and specific Cultural Capital measures.

Cultural Capital Variable	ACT1 Correlation and Significance	ACT3 Correlation and Significance
Music	$r(38) = .351, p < .05$*	$r(38) = .359, p < .05$*
Art	$r(38) = .567, p < .001$*	$r(38) = .571 , p < .001$*
Language	$r(38) = .869, p < .001$*	$r(38) = .866 , p < .001$*
Writing and Reading	$r(38) = .493, p < .001$*	$r(38) = .506 , p < .001$*
Technology	$r(38) = .226, p < .166$	$r(38) = .237$, p = .147
Other Cultural Capital	$r(38) = .639, p < .001$*	$r(38) = .650 , p < .001$*

*Indicates statistical significance

A series of linear regression analyses were computed to determine which cultural capital and AP course variables predict achievement scores, as well as to determine the unique contributions of each cultural capital or AP course variable. For each regression analysis, three predictor variables were included: total number of AP courses, total number of technology programs and the Cultural Capital index. The criterion variables (i.e. dependent variables) for the analyses were the various achievement measures (i.e. ACT1, ACT3, and all of the TCAP subject test percentages). The results of the regression analyses are presented in Table 3.1 and 3.2.

Table 3.1: Results from the Regression analyses in which AP courses, technology courses and the Cultural Capital Index were regressed on Achievement Measures.

Student Achievement Dependent Variables	Predictor Variables	*b*	SE	*t*	*p*	R^2
ACT3	AP Courses	.251	.073	3.436	<.005**	.702
	Cultural Capital Index	.041	.024	1.730	.093*	.702
	Technology	-.256	.128	-1.994	.054*	.702
ACT1	AP Courses	.248	.075	3.308	<.005**	.693
	Cultural Capital Index	.043	.024	1.772	.085*	.693
	Technology	-.272	.132	-2.063	<.05**	.693
TCAP Algebra 1	AP Courses	1.1883	.592	3.181	<.005**	.639
	Cultural Capital Index	.153	.192	.796	.431	.639
	Technology	.304	1.041	.292	.772	.639
TCAP Algebra 2	AP Courses	2.627	.467	5.624	<.001**	.756
	Cultural Capital Index	-.012	.152	-.076	.939	.756
	Technology	-.799	.822	-.972	.338	.756
TCAP Biology 1	AP Courses	1.805	.878	2.056	<.05**	.491
	Cultural	.240	.285	.843	.405	.491

	Capital Index					
	Technology	.5	1.543	.324	.748	.491
TCAP English 1	AP Courses	1.115	.709	1.625	.113	.619
	Cultural Capital Index	547	.230	.2.373	<.05**	.619
	Technology	-.689	1.247	-.553	.584	.619
TCAP English 2	AP Courses	1.624	.766	2.120	<.05**	.553
	Cultural Capital Index	.352	.249	1.416	.166	.553
	Technology	-.673	1.347	-.499	.621	.553
TCAP English 3	AP Courses	1.671	.559	2.988	<.01**	.570
	Cultural Capital Index	.130	.182	.713	.480	.570
	Technology	-.693	.983	-.710	.483	.570
TCAP US History	AP Courses	-.417	.983	-.474	.674	.261
	Cultural Capital Index	.556	.319	1.741	.091*	.261
	Technology	1.276	1.730	.738	.466	.261

*Indicates marginal significance
**Indicates significance

Discussion

Cultural capital was significantly correlated with all student achievement scores (ACT and TCAP). The schools with the most cultural capital had the highest achievement scores. These findings are consistent with the predictions that there would be a positive relationship between cultural capital and student achievement.

The arts curriculum may foster growth of many educationally related skills. For example, studying the form and content of a piece of art teaches analysis skills that are similar to those needed to analyze short stories or poems. These skills may lead to gains in other subjects but mainly they expand students' horizons and understanding and promote critical thinking (Eisner, 1999). The arts also may increase awareness. Arts

courses may teach students to notice details and features, increasing their perception and understanding of the aesthetics of the general environment (Eisner, 1999).

Classes such as African American Literature that taught cultural knowledge and cultural appreciation were included in the total measure of cultural capital. These classes may aid in increasing cultural knowledge, which may instill a more positive view of other cultures. Previous research on prejudice has found that teaching students about different cultures, such as in diversity courses, reduces their prejudice (Hogan & Mallott, 2005; Hussey, Fleck & Warner, 2010). Additionally, cross-cultural experiences promote understanding of other cultures and reduce ethnocentrism, the belief that one's group is superior to other groups (Puffer, 1994).

Some may argue that our measures of cultural capital are actually measures of each school's financial capital because the schools with more financial resources have more money to spend on cultural capital programs. While that may have been the case before the merger in 2012, since then all schools in Shelby County receive equal funding. This relationship is more likely related to the types of cultural capital resources schools choose to spend their money on.

Cultural capital had a significant positive relationship to attendance and graduation rates and a significant negative relationship with dropout rates. In other words, the schools with the most cultural capital also had the highest attendance and graduation rates as well as the lowest dropout rates. This suggests that cultural capital may be beneficial in the educational system for keeping students interested in school longer. Having cultural capital courses and activities in high schools may engage students who are not interested in the basic curriculum of reading, writing and arithmetic, and this may in turn make

students less likely to see school as drudgery. The implications of this finding for SCS should be reviewed more closely. Administrators need to recognize that art, music, and other cultural capital programs may reduce the number of students who dropout by increasing their interest in school and engaging them in the courses that intersect with their interests (e.g., students interested in music may become more engaged in a physics class because they are interested in acoustics).

AP course were strongly positively correlated with achievement scores as well as cultural capital. These advanced classes are commonly seen as a way of preparing students for college by teaching them the knowledge and skills that will help them succeed. While these classes do prepare students for the course loads of college level education, these classes do more than just increase basic knowledge and skills. They also increase cultural capital, explaining why they positively predict cultural capital.

AP classes increase cultural capital by helping students develop a habitus that is consistent with a success-oriented mindset and valued by the dominant culture. They teach students college level norms of behavior, to value learning for the sake of learning, develop high expectations for oneself, develop willingness to learn and collaborate with others, and self-efficacy (Juarez, 2010). AP courses also communicate the culture of college or the culture of achievement. Knowledge of the culture of college is cultural capital because it is the behavior and habitus that is valued in colleges. By conferring the culture of achievement, AP classes indirectly confer the values that the dominant culture values but the educational system does not explicitly teach.

One's actions are largely influenced by their dispositions and beliefs. Positive habitus towards education may cultivate and sustain habits and behaviors that lead to

educational success such as efficient time management, note taking, listening and interaction skills (Juarez, 2010). The educational system rewards students who regularly employ these behaviors through good grades, positive interactions with teachers and other types of positive reinforcement. This positive reinforcement thus further reinforces these dispositions about education and leads to more and more behaviors that aid in educational achievement

All independent measures of cultural capital were correlated with ACT scores except technology. For this reason, technology was not included in the cultural capital index. We realized that technology wasn't having the same effect on achievement as the other cultural capital variables so we decided to analyze it independently of the other measures as to see why it might be producing a different relationship. We noticed that most of the programs the high schools offered taught only basic skills. We understood this as indicative that these programs may not be teaching students the importance of these skills within the contents of academic subjects.

The linear regression analysis evaluated if and how strongly AP classes, cultural capital and technology predicted student achievement scores. Both AP courses and cultural capital significantly positively predicted ACT scores. This is interesting because it shows that both AP courses and Cultural capital predict ACT achievement, independent of each other.

One explanation for why cultural capital predicts ACT scores is the knowledge of how to be an effective test taker may be a type of cultural capital. The ACT evaluates many subject areas but it also evaluates one's ability to take a test. Good test takers know how much time to spend on questions, how to maximize their chances of guessing

unknown questions correctly and know when to skip over hard questions and come back to them at the end. Knowing these tricks to good test taking demonstrates familiarity with and knowledge of standardized tests, which are important measures of ability used by the education system, and thus, a valued measure of success in the dominant culture.

A reason of why AP courses may predict ACT scores is that AP classes are most likely teaching the same types of skills and knowledge that are tested on the ACT. Another explanations is these classes may instill positive attitudes towards education and thus, a higher value of measures the educational system deems as a valid assessment of achievement. The ACT is a highly respected measure of achievement and potential in the education system so if you value education, you respect the ACT as an accurate assessor of ability. This belief that the ACT is a valid measure of one's ability and potential success may motivate students to engage in behaviors and practices that seek to maximize their score on this test.

AP courses were positive predictors of all TCAP percentages except English 1 and US History. AP courses were not a significant predictor of US History scores because of the lack of variance. It is unclear as to why they did not predict English 1 TCAP percentages while it was a significant predictor of English 2 and English 3 TCAP averages. Overall, this finding indicates that AP courses are teaching students the skills that are tested and result in higher scores on the TCAP tests.

Technology negatively predicted ACT scores and did not predict any of the TCAP scores. This is because the technology classes in Shelby County are overwhelmingly vocational based. These are not the types of technology programs that foster increases in cultural capital. These programs are lacking because they do not emphasize what to do

with the technological skills they are learning nor do they apply them to other educational areas (Cuban, 2001). Schools are also not training teachers on how to integrate technology into classes and courses, inhibiting students from making connections between their technological skills and the course material they are studying (Cuban, 2001). Rather than acting as a tool to further understand and utilize other information, these programs seem to be used as a Band-Aid or replacement for other classes and programs. Just having technology programs does not mean that they will create any type of cultural capital for students to access. The cultural capital comes from using technology as a tool to access and better understand information within a content domain (DiMaggio et al., 2001).

Kozol in his book "The Shame of the Nation" notices this trend in urban schools. Many of the schools display work related themes even as early as elementary school using the title "manager" to describe the children who do certain jobs within the classroom. This managerial thinking is evident in the view of learning as something one possesses rather than engages in. For example, in one classroom each child had earnings charts containing different writing skills and the corresponding earnings they would get if they displayed these skills (Kozol, 2005). By putting a value on learning the students were not being taught the value of education itself. Additionally, in urban high schools the students were encouraged to choose a career path, most often vocational, at the beginning of their high school career (Kozol, 2005). This did not encourage the students to learn for learning's sake, but to learn because could economically benefit from these skills one day.

This is very similar to the trends found in low achieving high schools in Memphis. All high schools had technology programs but schools with low achievement generally had more technology programs than other cultural capital programs. Most of these programs were mainly focused on teaching students vocational skills (e.g. Desktop publishing, Word processing, Spreadsheet creating, technical issues, etc.) but did not teach students how to use these skills in content domains. They focused on mechanical and technical skills rather than providing opportunities for students to cultivate skills that would be beneficial to them in the educational system such as communication, application, synthesis, critical thinking and creative expression skills. By not providing students opportunities to develop skills that would aid them in the educational system, many high schools are hindering these students from achievement in the educational system and not creating a culture of achievement for them to thrive in.

Solutions

Shelby County High Schools spend millions of dollars on technology (Shelby County Schools Finance Department, 2014). All high schools included had at least one technology program, and of the low achieving schools, most had very high ratios of technology programs to cultural capital programs. Schools are spending significant amounts of money to ensure students receive the best technology but our results show that it is not positively affecting student achievement. We believe that high schools should reallocate the funds that would be spent on technology and use them for art programs, music programs, language programs, and AP programs. These funds should also go towards attracting high quality, long-term teachers to teach these programs. All

of these cultural programs would more positively benefit and provide more cultural capital opportunities for their students.

Limitations

This study has several limitations. Time constraints presented a significant problem. The study took place during a six week period which limited the amount of data that could be collected for each school.

Several of the schools had recently broken away from the Shelby County School district and had formed their own municipal school district. Many of these new school districts did not have updated websites which made collecting data more challenging. Data was excluded for schools that did not have complete listings of courses and extracurricular activities.

Another limitation was the possibility of potentially confounding variables. The schools with the most cultural capital were generally the schools with the most financial resources so the relationship found could be due to greater financial resources to pay for cultural capital programs. We eliminated as this as a potential explanation for the relationship because since the merger, all schools in SCS receive equal amount of funding.

The scope of this study was a limiting factor because many of the disparities in educational achievement in high schools are impacted by substandard education in prior years (elementary and middle school). From 1996 to 2002, the difference in TCAP scores between Shelby County and Memphis City schools grew each year from 3rd grade to 5th grade in all subjects but Social Studies (Pohlmann, 2008). It can be assumed that

these disparities kept growing into the large achievement gap we now see at the high school level. To truly understand the relationship at the high school level it is essential to study this relationship for students in elementary and middle school to see if the relationship is similar at different educational levels.

Future Research

Future research should also expand upon the other cultural resources offered by each high school. This could include the number of visits by college admissions counselors and the number and type of outside speakers that visit schools. This would create a more comprehensive view of the cultural capital offerings of each school and may help determine which aspects of cultural capital have the greatest effect on achievement.

Future research should look at the relationship between cultural capital and educational achievement in elementary and middle schools in Shelby County. This is important because the relationship between cultural capital and educational achievement may be greater at younger years. This would also help assess whether the relationship grows or diminishes the longer a student is in the educational system.

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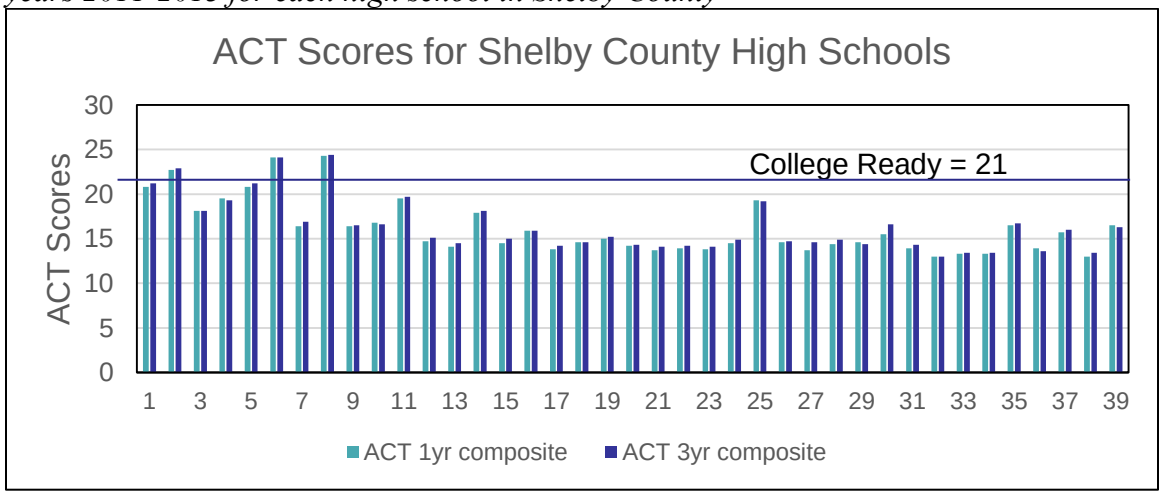
Appendix

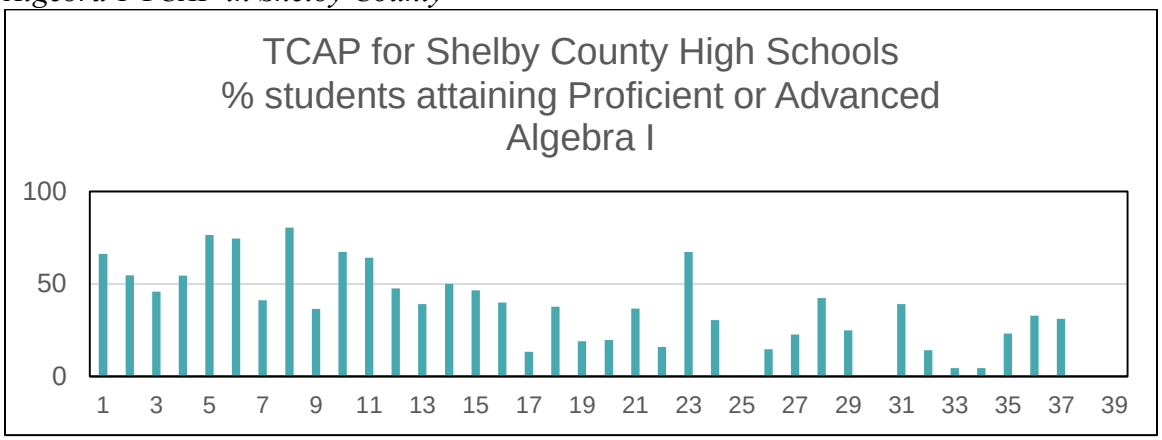
Table 4: Showing the difference of correlational coefficients between cultural capital total without technology and cultural capital total with technology for student achievement measures

	Cultural Capital without Technology		Cultural Capital with Technology	
Independent Variable	Correlation	Significance	Correlation	Significance
ACT1 Average	.743	$p < .001$*	.723	$p < .001$*
ACT1 English	.742	$p < .001$*	.724	$p < .001$*
ACT1 Math	.728	$p < .001$*	.706	$p < .001$*
ACT1 Reading	.715	$p < .001$*	.695	$p < .001$*
ACT1 Science	.752	$p < .001$*	.733	$p < .001$*
ACT3 Average	.748	$p < .001$*	.729	$p < .001$*
ACT3 English	.718	$p < .001$*	.701	$p < .001$*
ACT3 Math	.743	$p < .001$*	.722	$p < .001$*
ACT3 Reading	.751	$p < .001$*	.732	$p < .001$*
ACT3 Science	.755	$p < .001$*	.736	$p < .001$*
TCAP Algebra1	.731	$p < .001$*	.730	$p < .001$*
TCAP Algebra2	.724	$p < .001$*	.713	$p < .001$*
TCAP Biology	.655	$p < .001$*	.655	$p < .001$*
TCAP English1	.765	$p < .001$*	.757	$p < .001$*
TCAP English2	.701	$p < .001$*	.693	$p < .001$*
TCAP English3	.672	$p < .001$*	.661	$p < .001$*
TCAP US History	.495	$p < .005$*	.502	$p < .005$*

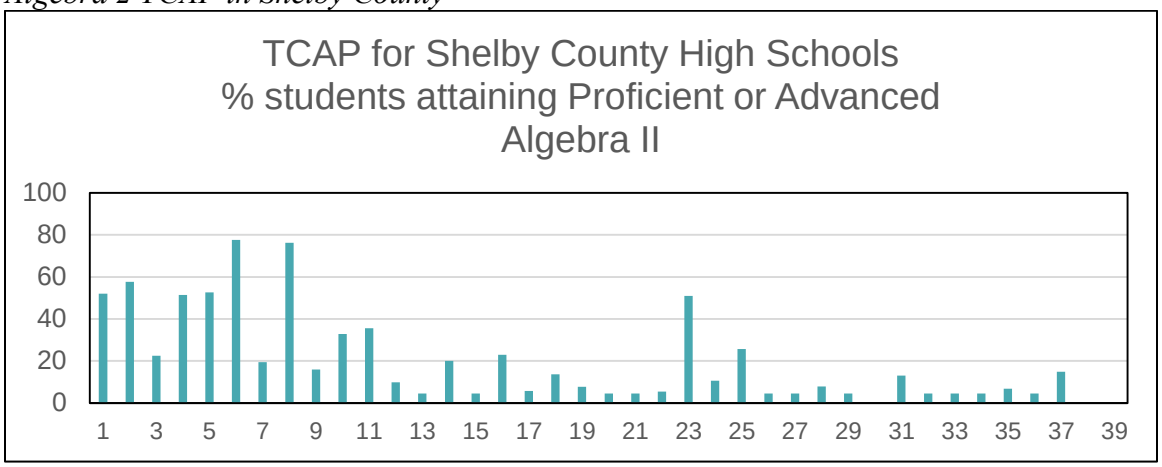
Graph 1: Showing the average composite ACT scores for 2013 and the average for the years 2011-2013 for each high school in Shelby County



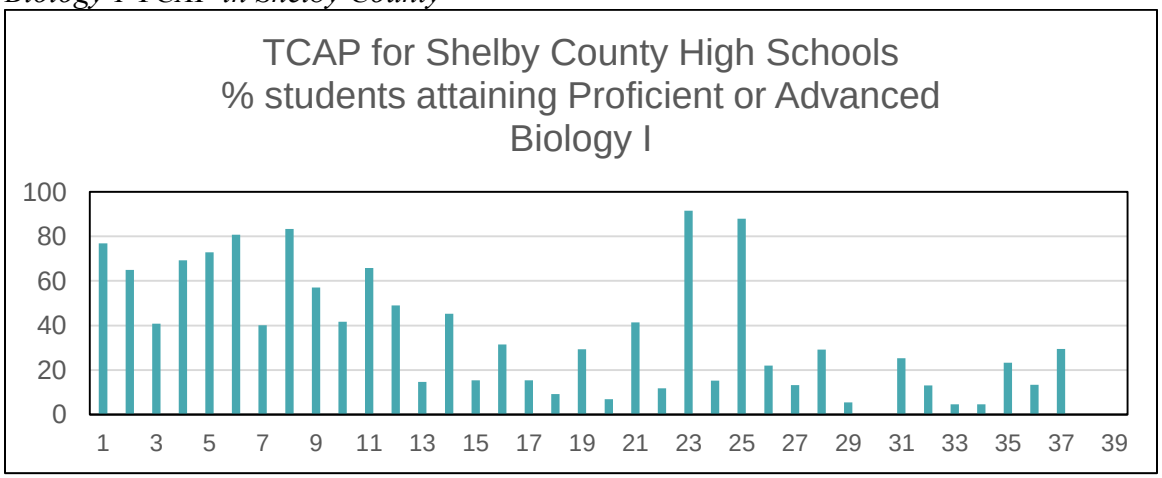
Graph 2: Showing the percentage of students who attained proficient or advanced on the Algebra 1 TCAP in Shelby County



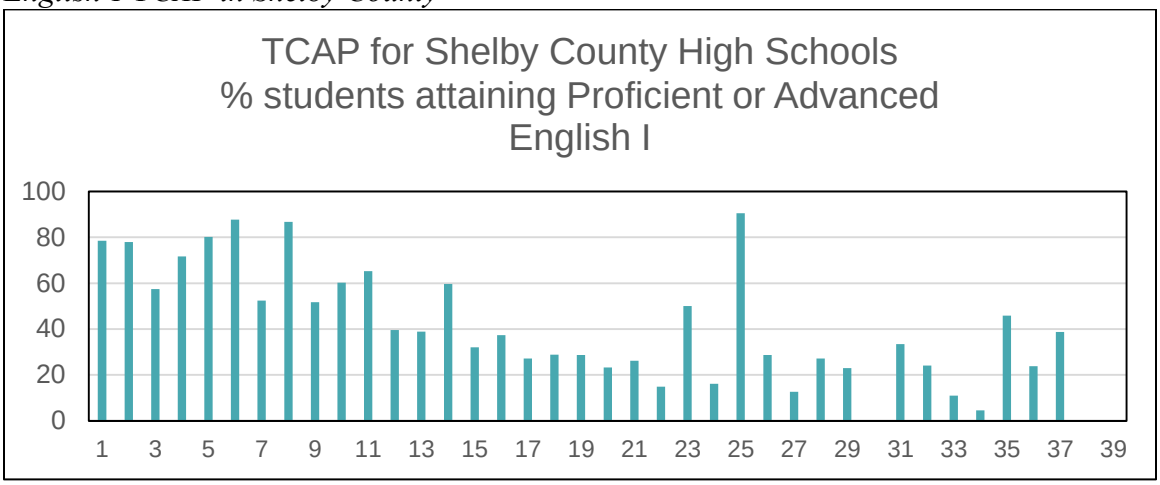
Graph 3: Showing the percentage of students who attained proficient or advanced on the Algebra 2 TCAP in Shelby County



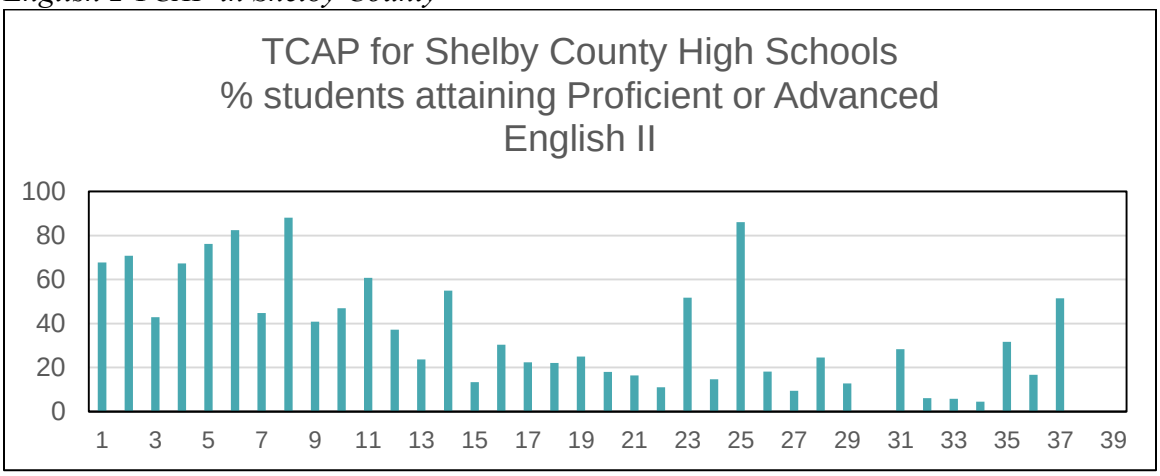
Graph 4: Showing the percentage of students who attained proficient or advanced on the Biology 1 TCAP in Shelby County



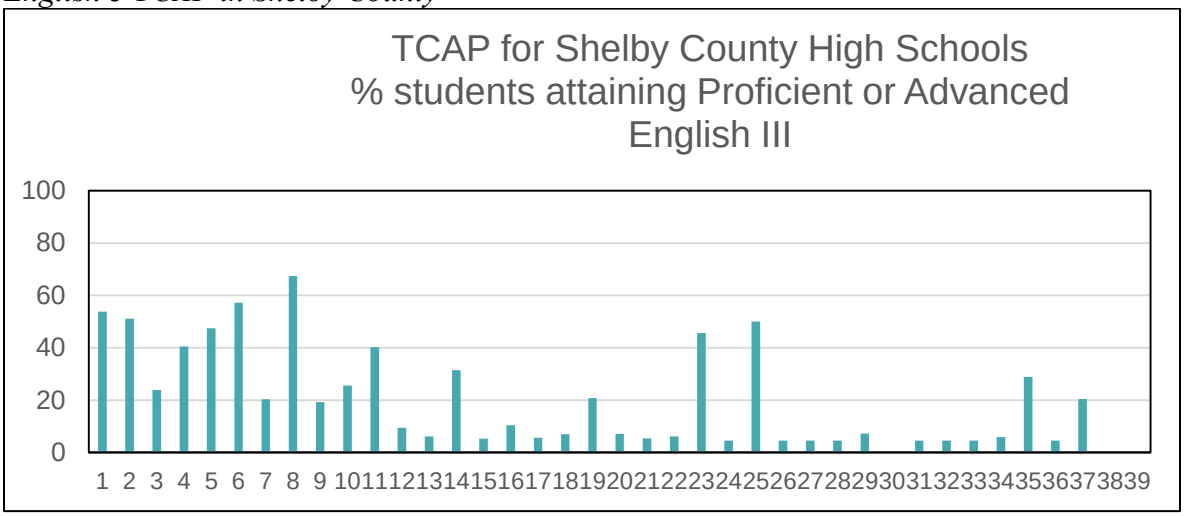
Graph 5: Showing the percentage of students who attained proficient or advanced on the English 1 TCAP in Shelby County



Graph 6: Showing the percentage of students who attained proficient or advanced on the English 2 TCAP in Shelby County



Graph 7: Showing the percentage of students who attained proficient or advanced on the English 3 TCAP in Shelby County



Graph 8: Showing the percentage of students who attained proficient or advanced on the US History TCAP in Shelby County

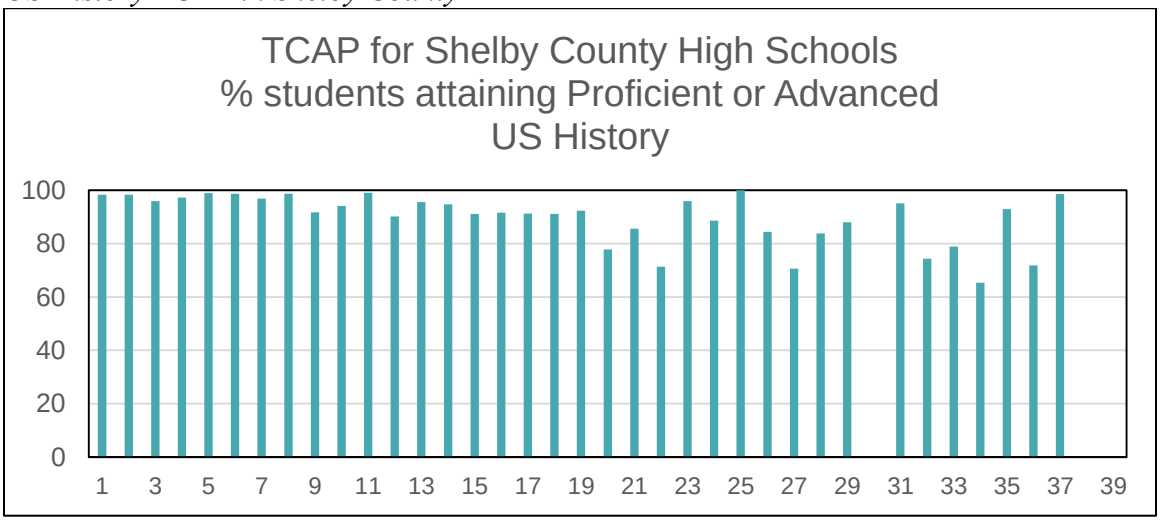


Table 5: Showing the correlations between the predictors of student achievement (Cultural capital, AP courses and technology) and student achievement

Student Achievement Measure	Cultural Capital	AP courses	Technology
ACT from 2013	.743*	.803*	.226
ACT from 2011- 2013	.748*	.811*	.237
Algebra 1	.731*	.793*	.407*
Algebra 2	.724*	.865*	.303
Biology1	.655*	.689*	.377*
English 1	.765*	.746*	.359*
English 2	.701*	.726*	.322*
English 3	.672*	.749*	.238
US History	.495*	.390*	.361

Table 6: Showing the number of AP courses offered at each high school in Shelby County

School name	**Number of AP's offered.**
Collierville High School	25
Houston High School	23
Germantown High School	21
White Station High School	20
Cordova High School	19
Southwind High School	18
Arlington High School	18
Bartlett High School	14
Overton High School	12
East High School	10
B T Washington High School	10
Carver High School	9
Bolton High School	9
Central High School	8
Whitehaven High School	7
Oakhaven High School	7
Sheffield High School	6
Douglass High School	6
Wooddale High School	5
Northside High School	4
Memphis Health Careers Academy	4
Raleigh Egypt High School	3
Melrose High School	3
Manassas High School	3
Kirby High School	3
Westwood High School	2
Mitchell High School	2
Hillcrest High School	2
Trezevant High School	0
Southwest Career and Technical School	0
Memphis Academy of Science and Engineering	0
MCS Prep School - Northwest	0
MCS Prep School - Northeast	0
MCS Prep School	0
MCS Prep School	0
Martin Luther King Transition Center	0
Hollis F. Price Middle College High School	0
Frayser High School	0
City University School Of Liberal Arts	0