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# THE CHARTER SCHOOLS RESOURCE JOURNAL

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Education &  
Human Services

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 Fall 2019  
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# THE CHARTER SCHOOLS RESOURCE JOURNAL



2017-2018

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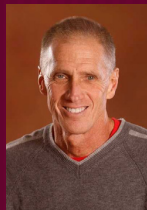
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Project Based Learning Schools That Are Assessing More  
Than Just Academic Achievement

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### Abstract

Eight project-based learning charter schools participated in this correlational study. The schools are affiliated with EdVisions, a non-profit organization that helps create individualized, project-based learning schools. There were five variables in this study: the hope survey, self-direction rubric, collaboration rubric, math RIT scores, and reading RIT scores. This study compared two variables at a time in attempts to determine relationship strengths. For example, hope and math, hope and reading, hope and self-direction, hope and collaboration, etc. Growth occurred in all five variables over a one year period (Fall 2017 to Spring of 2018). Although reading, with an N of 483, was not significant with a correlation of .07, the researchers found that all other combinations of variables were significant with a *p value* of  $< 0.00001!$  It is evident that Hope and Life Skills, such as self-direction and collaboration positively impact academic achievement with math and reading test scores.

**Keywords:** Project-based learning, charter schools, hope survey, life skills, RIT scores, EdVisions

**Project Based Learning Schools That Are Assessing More  
Than Just Academic Achievement**

## **Introduction**

Imagine if students could work on projects in all their classes, and ask as many questions as they like while practicing skills such as problem solving, critical thinking, time management, and responsibility. According to Pearlman (2009), students need a different set of skills that include: learning and thinking skills, technology literacy skills, and life skills in order to compete in the future, and that these skills can best be obtained through project based learning. Educators should give students opportunities to participate in project based learning so they can practice these skills

Although project based learning is a more intensive learning process that requires more time to complete projects, it allows for deeper learning, which inspires and motivates students. The learning is rich. Students learn useful skills that they carry with them after they graduate, which have a lasting effect on their lives.

In a similar vein this research study analyzed academic achievement, social-emotional growth, and life skill development with students attending project based learning schools. It was conducted with students from eight project-based learning charter schools affiliated with EdVisions, which is a non-profit educational development organization focused on innovation through personalization, teacher and student empowerment, and student driven project-based learning. The organization provides support for school transformation and new school development, including coaching, workshops, conferences, access to research, and a variety of instructional and assessment tools (<http://edvisions.org>).

## **Review of Literature**

Multiple research studies suggest when students are engaged in creating and completing projects they learn important life skills such as problem solving, time management, responsibility, and collaboration. (Blumenfeld, Soloway, Krajcik, Guzdial, & Palincsar, 1991; Levine, 2002; Newell, 2003; Littky & Grabelle, 2004; Grant & Branch, 2005; Larmer, Mergendoller, & Boss, 2015; Wurdinger, 2016). In addition, Krauss and Boss (2013, p. 18) identified a number of skills that students learn while engaged in project-based learning (PBL) including flexibility, organization, self-control, task initiation, time management, and metacognition. Increasingly, K-12 teachers around the world are beginning to use this method because they know it challenges students on an individual level, motivating and inspiring them by tapping into their own learning styles (Bender, 2012).

Other researchers have analyzed teacher acceptance, student motivation, and student achievement, and have come to the conclusion project-based learning is an effective teaching methodology. For example, a study conducted by Barron, Schwartz, Vye, Moore, Petrosino, Zech, and Bransford (1998) discovered that academic performance and motivation are improved when using this method. In their comprehensive study, they had students create blueprints of chairs and playhouses, and then present these drawings to their classmates. They measured low, average, and high achieving students and found all three groups had significant improvements in their ability to understand difficult math concepts after using the project method. This approach to learning not only had a significant impact on their comprehension, but it also had a positive impact on their motivation. Fifty percent of the students interviewed about their experience specifically mentioned the projects were a very important part of their school year (p. 305).

Ultimately, project-based learning is a teaching method that allows students to apply what they are learning and are assessed by demonstrating their knowledge. Students in project-based learning schools demonstrate what they know through designing and

creating projects, which they present to their peers, and are then evaluated with performance-based assessments. This process allows students to meet academic standards related to their projects, but it also allows them to learn life skills like creativity and critical thinking, and acquire hope for the future.

Since 1992 reports and research studies have identified specific skills such as, problem solving, critical thinking, adaptability, creativity, time management, and collaboration that employers desire but are lacking in their young new hires (SCANS, 1992; Wagner, 2008; Trilling & Fadel, 2009; National Association of Colleges and Employers, 2016). Project-based learning allows students to learn life skills that they can carry with them long after they graduate from school (Meyer & Wurdinger, 2016).

### **Schools in the Study**

Charter schools are a part of a disrupting influence within the education landscape. Disruptive innovations are in the position of offering non-consumption choices (Christensen, Horn, Johnson (2017)). This simply means that charters may offer what the comprehensive Middle and High Schools do not – different programs and outcomes which parents and some teachers are not receiving otherwise. The schools must explain to authorizers and state authorities in their charters just what those outcomes will be. Early in the development of charters, innovative, personalized, project-based and computerized schools offered to develop life skills, technology

skills, and growth in dispositions that would make students life-long learners. Eventually there were assessments developed to exhibit the growth of such skills.

In the past ten years the original concept of charters, to deliver different outcomes, was co-opted by the testing culture (Newell, Van Ryzin, 2009). Now charters are called upon to deliver the same outcomes as all other schools, producing better test scores. This mandate has crippled the charter movement by demanding better scores on tests, setting back the innovative methods developed to deliver life skills. And, until recently, social-emotional outcomes were ignored as well. None-the-less, the schools in the network tested have been meeting testing demands as well as life skills and social emotional growth.

The schools in this study are part of a network influenced by EdVisions, a non-profit organization that helps create individualized, project-based learning sites. The EdVisions program consists of four pillars, or essentials: 1) an individualized, project-based program, where each student is meeting standards via interdisciplinary projects that are driven by individual learning plans, personal interests and self-pacing; 2) a small, community centered culture, which includes full-time advisories, personal oversight, group collaboration, community involvement, and family friendliness; 3) use of authentic assessments, with student projects presented to and assessed by committee, which offers assessment of process and assessment of life skills; and, 4) teacher powered schools, where teachers “call the shots”, including control of budget, hiring, curriculum, and programs.

The eight EdVisions Schools chosen for this study included: Avalon, Escuela Verde, Minnesota New Country School, Northern Lights Community School, Northwest Passages, Sage Academy, and Valley New School. These schools have been in

existence for over 15 years. Six are Minnesota charter schools, and two are Wisconsin charter schools, half of which served 6-12th grade populations and the other half 9-12.

The Minnesota Education Department and the Wisconsin Department of Public Instruction websites were used to compare demographic information. The number of white to non-white populations were virtually the same: 68% in the EdVisions Schools, 67% in Minnesota, and 70% in Wisconsin (<https://education.mn.gov/mde/index.html> and <https://dpi.wi.gov>). The schools in the study averaged more students that qualified for free/reduced lunch (40.6% to 37.2%), and by far more students who qualified for special education (35.8% to 15.7%) than the State of Minnesota. Thus these charter schools are being asked to perform as well or better than their non-charter counterparts with a much more demanding population.

## **Methodology**

There were five variables in this study: the hope survey, self-direction rubric, collaboration rubric, math RIT scores, and reading RIT scores. Scores were collected on each of these variables at the beginning of the school year (Fall 2017) and at the end of the school year (Spring 2018). Scores were calculated to determine growth over this one-year time period.

A correlational study was also conducted. This study compared two variables at a time in attempts to determine relationship strengths. For example, hope and math, hope and reading, hope and self-direction, hope and collaboration, etc. Posttest scores (Spring 2018) for the five variables were used to determine Pearson *R* correlation coefficients and *p* values (significance).

The Microsoft Excel program was used to input all data, and to determine the Pearson  $R$  correlation coefficients, as well as the  $p$  values. The relationship between the variables is considered non-existent or extremely weak with coefficients between -0.1 to 0.1. They are considered weak between 0.1 to 0.3, moderate between 0.3 to 0.5, and strong between 0.5 to 1.0. The  $p$  values were calculated to determine if any of the correlations were statistically significant.

This research was conducted under the auspices of EdVisions and in order to participate in this study schools were required to sign a Memorandum of Understanding (MOU). For privacy purposes, student and teacher names were omitted in this study.

#### *MAP Tests (RIT Scores)*

MAP tests are a way for schools to measure student achievement in math and reading, and are aligned with the Minnesota State Standards. MAP scores are reported using the Rasch Unit (RIT) with scores ranging from 100 to 350. Although these tests are not required by the state of Minnesota, many schools administer them, perhaps because they are a more accurate measurement of student growth over time.

MAP tests are not standardized and do not use the same set of questions for all students within a specific grade level. For example, if a tenth grade student were to answer a math question incorrectly the test adjusts itself to provide the student with easier questions. Likewise, if the student answers a question correctly the test adjusts by asking harder questions. This gives teachers a better understanding of where a student is at academically at a given point in time and allows them to adapt their teaching to meet individual student's needs. In this study we collected the RIT scores for students at the eight schools in math and reading.

### *Hope Survey*

The hope survey is designed to give schools a comprehensive tool that assesses the school climate and culture from the students' viewpoint. It can pinpoint strengths as well as areas for improvement. The results from the hope survey inform staff and administrators with quantitative data to help design proactive plans to improve school practices and procedures in order to enhance and enrich the school climate, culture and the student experience. This tool can be implemented and managed for school-wide improvement in a way that directly benefits the students. The survey itself is easy to use and the data collected informs practical strategies to help students build positive dispositions.

Students with higher hope scores tend to set more challenging goals, believe they can achieve their goals, and have a higher chance of graduation from college. The hope survey is the only comprehensive tool that addresses the constructs of engagement, goal orientation, autonomy, and belongingness with focused strategies to help educators effectively apply the data ([edvisions.org/the-edvision/hope-survey](https://edvisions.org/the-edvision/hope-survey)). Hope scores were collected for all students at the beginning and end of the 2017-2018 school year.

In an earlier study using the hope survey Newell and Van Ryzin (2009) found a correlation between engagement and hope, and that all other variables (goal orientation, autonomy, and belongingness) have correlations to engagement (pp.46-48). They conclude, schools that utilize the hope survey know that to raise engagement, allowing for more voice and choice for students (especially as they grow older) creates a perception of autonomy, and consequently, student engagement may be raised.

*Life Skills Rubric*

The Qualtrics software program was used to create a life skills rubric on self-direction and collaboration. Teachers filled out the rubric in order to compare growth from the beginning of the Fall 2017 school year to the end of the school year (Spring 2018). The same Qualtrics survey was used for both the pretest (beginning of school year) and the posttest (end of the school year), so each teacher filled it out twice for each student.

This rubric was designed after having multiple discussions with school teachers and the EdVisions Comprehensive Assessment Plan (ECAP) committee. The self-direction portion of the rubric consisted of six qualifiers that included: goal setting, use of resources, self-management, internal motivation, self-evaluation, and adaptability. The collaboration portion of the rubric consisted of five qualifiers including: communication skills, social skills, interaction with peers and adults, presentation skills, and leader and organizer. Prompts were provided under the qualifiers on the Qualtrics rubric to help teachers determine the student's level of skill for each qualifier. Students were ranked according to eight skill levels for each qualifier. Level one was the lowest and was identified as "little awareness". Level two was identified as "aware of and attempts some items." Level three was "demonstrates some items with prodding." Level 4 was "demonstrates many items inconsistently with prodding." Level five was "demonstrates many items with encouragement." Level six was "demonstrates most items with support." Level seven was "demonstrates items consistently with little support," and the highest level (eight) was "self-directed, can function autonomously." Students were ranked one through eight for each qualifier. The life skills rubric can be found in Appendix One .

## Findings

This study was done to determine changes in scores from the beginning of the school year to the end of the school year, and to determine correlational values between two variables at a time.

There were 646 responses for self-direction and collaboration. Only one school refused to do the self-direction and collaboration rubric, as they utilized a different kind of life skill assessment. There were 604 pre-post responses for the hope survey, 560 pre-post scores for math RIT's, and 550 pre-post scores for reading RIT'. From those responses, we found the following:

N	Assessment	Score 17	Score 18	Change
604	Hope Survey	47.87	49.03	+1.15
560	Math RIT	230.81	234.27	+3.46
550	Reading RIT	224.72	226.73	+2.01
646	Self-Direction	3.55	4.58	+1.03
646	Collaboration	3.81	4.82	+1.01

The researchers then extracted data for the correlation coefficients between two variables at a time to determine the  $r$  values and  $p$  values. There were 492 students who completed the math tests and hope surveys, with a correlation of .162, which had a  $p$  value of 0.00039, a significant correlation. Although reading, with an N of 483, was not significant with a correlation of .07, the researchers found that all other combinations of variables were significant with a  $p$  value of  $< 0.00001!$  (See chart below: all scores are from 2018 data)

<b>Variables</b>		<b><i>r</i> value</b>	<b><i>p</i> value</b>	<b>Significance</b>	<b>Participants</b>
Hope	Math	0.16	p=.000309	p<0.01 Significant	N=492
Hope	Reading	0.07	p=.124	Not Significant	N=483
Hope	Self Direction	0.28	p=.00001	p<0.01 Significant	N=507
Hope	Collaboration	0.23	p=.00001	p<0.01 Significant	N=508
Math	Reading	0.69	p=.00001	p<0.01 Significant	N=608
Math	Self Direction	0.35	p=.00001	p<0.01 Significant	N=398
Math	Collaboration	0.33	p=.00001	p<0.01 Significant	N=398
Reading	Self Direction	0.33	p=.00001	p<0.01 Significant	N=389
Reading	Collaboration	0.29	p=.00001	p<0.01 Significant	N=389
Self Direction	Collaboration	0.88	p=.00001	p<0.01 Significant	N=661

As can be seen, there were significant correlations among all variables except Reading and Hope, where a small correlation existed. Hope, the social-emotional aspect of a person's disposition toward being successful, was significantly correlated to all other variables. Also, all other variables were significantly correlated to the two Life Skills assessed; Self-direction, and Collaboration/Interaction. Interestingly, the Life Skills were also significantly correlated to both Math and Reading.

## Discussion

So, what do these numbers mean? The data indicates positive growth in all areas from the beginning to the end of the school year. The growth in hope was statistically significant, and represents a strong one-year gain. The growth in math was also strong, as the researchers assumed it to be the most difficult subject to teach in a project-based environment. Reading scores were lower but there was still growth. Self-direction and collaboration both increased to just over one point on an eight-point scale over the course of the school year.

Hope for over 600 students increased 1.15 points on the Hope Scale, from just below average, to slightly above average, an increase of 1.8%. The Math RIT scores rose 3.46 points, an increase of 1.2% for the 560 students who had pretest and posttest data. The Reading RIT increased 2.01 points, an increase of .7%. Self-Direction rose 1.02 points, for an increase of 12.9%; and Collaboration rose 1.01 points for an increase of 12.7%. In addition, there were correlations between all pairs of variables, albeit one was weak. There was also a relationship between each combination of variables that was statistically significant except for hope and reading.

RIT scores can be compared to national average gains – the Math and Reading increases are commensurate to the national average growth for 7<sup>th</sup> and 8<sup>th</sup> graders and well above the norm for 9-11<sup>th</sup> grades. A hope gain of 1.15 is quite significant, and can be compared to gains in past years. The life skills rubric was used for the first time, and it will take a number of more uses to establish norms.

There was a significant correlation of hope to other measurements. This is encouraging to those who realize that the social-emotional aspects of learning are important. And the fact that high Hope is a precursor to success means that it is worthy of being utilized as a measurement, as the Hope data can be used to create the proper culture for student success in Life Skills, and basic skills such as Math and Reading.

But hope is not just a corollary to learning – it is a core outcome, and paying attention to growth in hope will benefit students in many more ways. The fact that schools can in fact raise hope, especially when many students are coming to EdVisions’ project-based schools with lower than average hope, is gratifying; yet it is daunting, as well. Schools have to do more for students than ever, and raising hope for the future ought to be a goal, a mission. Teachers must pay attention to the needs of children with little hope.

Life skills are similar in that they help students develop confidence to do well, not only with their academic skills, but in all other areas of their lives. Admittedly, the findings for life skills are based upon opinions of the teachers, and as such may not have high inter-rater reliability. But as each of the teachers have utilized similar rubrics for many years, their judgements gave a strong picture of what is happening to students over time in their schools.

Wurdinger and Rudolph (2009) conducted a study with EdVisions alumni and found that they ranked themselves extremely high (80-90 percentile) with their life skills, but much lower (40-50 percentile) in their academic skills. Yet, fifty percent of these alumni completed a four-year college degree, whereas the National average is only 33 percent. Strong life skills allow students to

navigate their way through a four-year college degree. It is critically important for schools to promote and help students develop life skills that they can carry with them the rest of their lives.

These charter schools are finding ways of delivering not only growth in test scores, and meeting standards with demanding populations, but are developing life-long learners with the proper dispositions to be successful at the next level. Developing individualized methods while meeting state standards, and finding resources to do so, places a great deal of stress on schools assessing academic achievement, social -emotional growth, and life skill development. But by using individualized, project-based learning, they are able to rise to the challenge.

Project based learning allows students to think creatively, solve problems, learn important life skills, such as self-direction and collaboration, and work with their hands creating meaningful projects. This process of learning promotes creative thinkers, and motivates students to learn. It is effective at raising hope scores, life skills, as well as test scores, and educators all across the world should consider integrating it into their schools.

## **References**

Barron, B., Schwartz, D., Vye, N., Moore, A., Petrosino, A., Zech, L. & Bransford, J. (1998). Doing with understanding: lessons from research on problem and project-based learning. *The Journal of the Learning Sciences*, 7(3), 271-311.

Bender, W. (2012). *Project-based learning: Differentiating instruction for the 21st century*. Thousand Oaks, CA: Corwin.

Blumenfeld, P., Soloway, E., Marx, R., Krajcik, J., Guzdial, M., & Palincsar, A. (1991). Motivating project-based learning: sustaining the doing, supporting the learning. *Educationalist Psychologist*, 26(3&4), 369-398.

Christensen, C., Horn, M., Johnson, C. (2017) *Disrupting class: How disruptive innovation will change the way the world learns*: McGraw Hill: Chicago.

EdVisions Website. Retrieved from: (<http://www.edvisions.com/custom/SplashPage.asp>)

Grant, M. & Branch, R. (2005). Project based learning in a middle school: tracing abilities through the artifacts of learning. *Journal of Research on Technology in Education*, 38(1), 65-98.

Krauss, J., & Boss, S. (2013). *Thinking through project-based learning: Guiding deeper inquiry*. Thousand Oaks, CA: Corwin.

Larmer, J., Mergendoller, J., & Boss, S. (2015). *Setting the standard for project based learning*. Alexandria, VA: ASCD.

Levine, E. (2002). *One kid at a time: big lessons from a small school*. New York, NY: Teachers College Press.

Littky, D. & Grabelle, S. (2004). *The big picture: education is everyone's business*. Alexandria, VA: Association for Supervision and Curriculum Development.

Meyer, K. & Wurdinger, S. (2016). Students' perceptions of life skill development in project based learning schools. *Journal of Educational Issues*. 2(1), 94-114

National Association of Colleges and Employers website. *Job outlook 2016: The attributes employers want to see on new college graduates' resumes*. Retrieved from: <https://www.nacweb.org/career-development/trends-and-predictions/job-outlook-2016-attributes-employers-want-to-see-on-new-college-graduates-resumes/>

Newell, R. (2003). *Passion for learning: how project based learning meets the needs of 21st-century students*. Lanham, MD: The Scarecrow Press.

Newell R. & Van Ryzin, M. (2009). *Assessing what really matters in schools: Creating hope for the future*. Lanham, MD: Rowman and Littlefield.

Newell, R., Van Ryzin, M. Growing hope as a determinate of school success. *Phi Delta Kappan*, Vol. 88, No. 06 (February 2007): 465-471.

Pearlman, B. (2009). New skills for a new century: Students thrive on cooperation and problem solving. Retrieved from: <http://www.edutopia.org/new-skills-new-century>.

SCANS Report: U.S. Department of Labor. Retrieved from: <https://wdr.doleta.gov/SCANS/whatwork/>

Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*. San Francisco, CA: John Wiley & Sons.

Wisconsin department of Instruction website. (Retrieved from <https://dpi.wi.gov>).

Wagner, T. (2008). *The global achievement gap*. New York, NY: Basic Books.

Wurdinger, S. (2016). *The power of project based learning: Helping students develop important life skills*. Lanham, MD: Rowman and Littlefield.

Appendix One:

<b>Self-Directed Learner</b> <b>Student Number</b> _____	<b>1</b> Little Awareness	<b>2</b> Aware of and Attempts Some Items	<b>3</b> Demonstrates Some Items With Prodding	<b>4</b> Demonstrates Many Items Inconsistently with Prodding	<b>5</b> Demonstrates Many Items with Encouragement	<b>6</b> Demonstrates Most Items with Some Support	<b>7</b> Demonstrates Items Consistently with Little Support	<b>8</b> Self-directed, can Function Autonomously
<p style="text-align: center;"><i>Goal Setting</i></p> Develops large/and smaller goals for projects Develops specific and appropriate objectives Sets high standards of quality for self Organizes time and work well Develops career planning and participation Develops long-term projects, culminating with senior project								

<p><u>Use of Resources</u>                  Uses a Variety of resources                  Assesses information for validity                  Generates original ideas                  Synthesizes information and expresses own ideas and opinions</p>								
<p><u>Self-Management</u>                  Recognizes strengths and weakness                  Demonstrates interest in knowing more about self                  Can evaluate use of time in relation to credits, projects, presentations                  Sets high standards for self                  Takes ownership for own behavior and takes responsibility for the community</p>								
<p><u>Internal Motivation</u>                  Develops career planning and participation                  Identifies problems, makes own assumptions                  Has internal locus of control                  Can generate specific tasks for project and standard completion                  Perseveres in the face of difficulties                  Develops a passion for learning</p>								
<p><u>Self-Evaluation</u>                  Assesses own work very well                  Journals with perception and understanding                  Reflection goes beyond questions asked</p>								

Develops own criteria for personal and product evaluation								
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EdVisions Life Skill Assessment

<p><u>Adaptability</u>                  Has sufficient learning skills to adapt projects from original design                  Has shown creativity and problem solving when beset with problems                  Can take initiative and find creative solutions</p>								
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<p><b>Collaboration/Interaction</b></p>	<p><b>1</b> Little Awareness</p>	<p><b>2</b> Some Awareness</p>	<p><b>3</b> Demonstrates Some With Prodding</p>	<p><b>4</b> Demonstrates Many Inconsistently with Prodding</p>	<p><b>5</b> Demonstrates with Support and Encouragement</p>	<p><b>6</b> Demonstrates on Most Items, needs Some Support</p>	<p><b>7</b> Consistent on All Items, Needs Little Support</p>	<p><b>8</b> Self-directed, can Function Autonomously</p>
<p><u>Communication skills</u>                  Uses writing to communicate ideas, opinions, and perceptions                  Uses oral communication to communicate ideas, opinions, and perceptions                  Listens actively to other ideas                  Uses the opportunity to contribute in circles, assembly meetings, and in one-on-one with advisor                  Continues to improve reading, writing and presentation skills</p>								
<p><u>Social skills</u>                  Effectively responds to other's feelings and perceptions                  Accepts other's behavior and lifestyles                  Relates effectively within group discussions                  Demonstrates understanding and tolerance of others                  Stands up for others                  Handles confidential information wisely</p>								

EdVisions Life Skill Assessment

<p><u>Interaction with peers and adults</u>                  Interacts meaningfully with advisor                  Interacts meaningfully with peers                  Appreciates school, takes responsibility for work space, advisory, school in general                  Represents self and the school well when interacting with those outside of school                  Is helpful and caring when asked to work with others                  Demonstrates respect and is an open-minded, active listener</p>									
<p><u>Presentation skills</u>                  Introduces self with poise                  Identifies significance of project                  Acknowledges resources                  Makes eye contact, speaks to audience                  Speech is relaxed and conversational                  Speech is loud enough for everyone to hear                  Uses standard English, avoiding slang, etc.</p>									

<u>Leader and organizer</u> Consistently leads others and gets results Comprehends group roles and responsibilities Develops synergy rather than hinders results Can share a vision and follow through Effectively prioritizes and delegates						
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Performance Comparison between District Public Schools and Charter Schools:  
a Composite Resident District Average

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### **Abstract**

The purpose of this paper was to explore the methodology used to compare charter schools to other schools, whether to other charter schools or traditional school districts. Unlike their traditional public-school counterparts, the enrollment districts of charter public schools are not bounded by limited geographical area (or resident district). Rather, they are defined by an authorizer's district jurisdiction, which is legislatively defined. This phenomenon inserts a unique variable when looking to compare charter schools to traditional schools. Although both are public schools and have the same requirements for the data collection and reporting of student information, as well as the administration of standardized assessments, the conceptual model presented in this paper posits that the student makeup of a charter school is unique to that of traditional schools, as well as other charter schools. Therefore, a more equitable means to compare the schools is in order. One such solution is to create a mock comparator that uses the composite average of the districts where the charter school's students would most-likely have attended if not being enrolled in that charter school; known as a composite resident district average. This model accounts for student demographic differences and establishes a pseudo district for the purposes of comparing the charter school to a similar program, and therefore is a more equitable approach to comparing dislike schools.

*Keywords:* Charter Schools, School Performance, School Comparison, Composite Resident District

## **Introduction**

Since the first charter public school opened in 1992, various stakeholders have been interested in charter school performance and whether or not students attending charter schools are benefitting from their programs (Berends, Springer, & Walberg, 2008). Over the past 25 years there have been numerous studies and articles on charter school performance, seeking to determine whether or not charter schools are performing better or worse than their traditional public school district counterparts (Bulkley & Fidler, 2002; Hoxby & Rockoff, 2005; Betts & Tang, 2011; Maul & McClelland, 2013; Lopez, 2014; CREDO 2015; Jankens & Weiss, 2017, CREDO 2019). Despite the generally accepted methodology used within these studies, such as comparing average student achievement across school type, there are limitations that need addressing (Betts & Hill, 2006). One element that is not being taken into consideration is the difference in geographical enrollment districts: charter school geographic districts are not the same as traditional school geographic districts. Charter schools are required to operate within the boundaries of the authorizing district. In most states where charter schools operate, a charter school district's enrollment boundary is defined as the entire state, while traditional districts are much smaller and only encompass a fraction of the state's total geographical area (whether a county or other unique geographic district boundary).

Although geography may appear to be a small variable when considering student performance, it is a significant factor when comparing schools. Where a student resides has a substantial impact on the performance of that school (Thiele, Singleton, Pope & Stanistreet, 2014). Some charter schools draw most, if not all, of their students from the local school district, but many charter school students actually come from outside of the district the school physically

resides in (Figure 4). Therefore, comparing students from one community with students from another community is not an accurate portrayal of how each school district is performing, as both communities may have extreme differences in their demographics (Mead, 2006).

As an example, in 2016 students from the Bloomfield Hills School District, a suburb of Detroit, Michigan, had an average proficiency rate of 57.4% in Math and ELA in grades 3 through 8, with 9% of the student population being economically disadvantaged. The Detroit Community Schools, encompassing the City of Detroit, Michigan, by comparison, had a proficiency rate of 1.4% in Math and ELA in grades 3 through 8, with 93% Economically Disadvantaged Students), respectively (Source: [www.mischooldata.org](http://www.mischooldata.org)). That's over a 50 point difference in proficiency from two neighboring school districts. Clearly, these are two very different student populations with an 84% difference in their socioeconomic makeup.

Comparing the Bloomfield Hills School District to that of Detroit Community Schools, which are less than 20 miles from each other, would be naive and professionally inappropriate. Yet this is exactly what is being done with much of the current charter school research; comparing two dissimilar student populations and drawing what appears to be sound conclusions about their performance. Therefore, it could be concluded that the field needs to establish a new comparator that is representative of the students who are these charter school, not where the school is physically located. This paper, then, outlines a framework that reduces this incongruence by comparing student performance between charter schools and traditional district schools using a Composite Resident District average.

## Literature Review

### What is a Charter School?

A charter school (or public school academy), is a publicly funded school district that is independent from a traditional school district. Typically established by community members, charter schools often have a theme or specialty that seeks to provide an educational choice to the district's one-size-fits-all approach. Beginning in Minnesota in 1992, charter school legislation allowed applicants to request a charter from an authorizing agency (typically a local district, intermediate school district, community college, university, not-for-profit organization, or state agency) to open and operate a school using public funds (Finn, Manno, & Vanourek, 2000). In 2015-2016, there were approximately 6,800 charter schools in operation that enrolled 3 million students, which represents over 5% of the public school population (NAPCS, 2016).

The idea was that these new and innovative programs would be free of the traditional oversight and regulations that mired traditional districts, in exchange for increased accountability and performance. Although this may be the case for charter schools in some states, other states have enacted greater regulations on charter schools than the traditional system (e.g. Ohio).

Overall, Charter schools are similar to their traditional school counterparts. Laws, operational structure, educational approaches, philosophies, and even student performance vary state-by-state, but overall charter schools have not completely re-invented the way we think about education. They enroll children from the community and work to educate them in the bounds of the state laws in place. Some of the nuances that make them different, however, are significant and require unique solutions to ensure the programs are in compliance with the charter contract and all applicable laws.

As an example, many state laws set different geographical enrollment districts for charter schools than the traditional districts. In Michigan, the enrollment district for charter schools is the entire state. Therefore, student enrollment, recruitment, marketing and other aspects of student services look different than in a traditional district. Additionally, the enrollment district adds some complexities to the operations and oversight of charter schools which is the motivation of this paper.

### **Who Attends Charter Schools?**

Charter Schools are comprised of students ranging in ages from five through 24, depending on school design. Because charter schools are public schools, who receive public funds and follow federal and state public school regulations, they are open to all students, cannot charge tuition or fees, and are required by law not to discriminate based on race, color, religion, sex or national origin, in addition to special education status. Essentially, they must enroll any student who applies to their program if there is space. Charter Schools may set enrollment limits, so schools who have filled their enrollment capacity place students on a waitlist. Most states require charter schools to hold a spring application and enrollment cycle, which also includes a lottery for students placed on the waitlist.

This paper specifically, uses a school portfolio of charter schools authorized by Central Michigan University (CMU) in order to illustrate the model presented. During the 2016-2017 academic year CMU authorized a total of 62 charter schools with a total of 30,930 students, with schools that range in size from 58 to 2091 students (Fall 2017 MSDS). Demographics for CMU authorized charter schools are presented below (Tables 1-4).

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Table 1

*Total Free and Reduced Price Lunch (FRL) Students in CMU Authorized Schools*

School Year	FRL Status	Student Count	Percent
2016-2017	Non FRL	13,334	43%
2016-2017	Free Lunch	16,072	52%
2016-2017	Reduced Lunch	1,524	5%
2016-2017	Total FRL	17,596	57%

Table 2

*Total Special Education Students in CMU Authorized Schools*

School Year	Special Education Status	Student Count	Percent
2016-2017	Non-Special Education	2,7518	89%
2016-2017	Identified Special Education	3,412	11%

Table 3

*Total English Language Learner in CMU Authorized Schools*

School Year	ELL Status	Student Count	Percent
2016-2017	Non-ELL	2,8132	91%
2016-2017	Identified ELL	2,798	9%

Table 4

*Total Ethnicity Breakdown for CMU Authorized Schools*

School Year	Ethnicity	Student Count	Percent
2016-2017	Black or African-American	14573	47.1%
2016-2017	White	12112	39.2%

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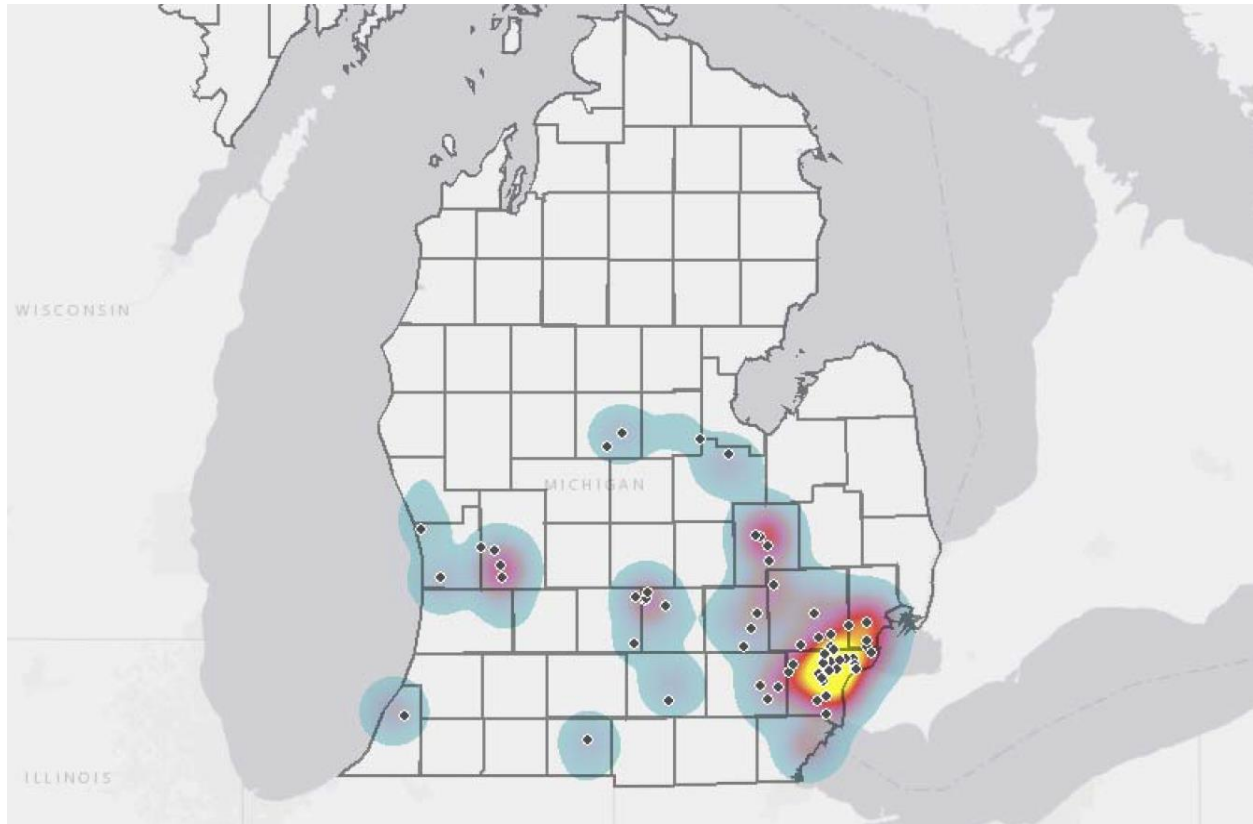
2016-2017	Multi-Racial	2171	7.0%
2016-2017	Asian American	988	3.2%
2016-2017	Hispanic or Latino	974	3.1%
2016-2017	American Indian or Alaska Native	94	0.3%
2016-2017	Native Hawaiian or Other Pacific Islander	18	0.1%

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### Where do the Students who Attend Charter Schools Come From?

Students come from all over Michigan to attend charter schools, not just within their host district or even local community. A total of 417 school districts are represented among the 62 CMU charter schools. Although Michigan cyber charter schools enroll the greatest geographic diversity of charter schools traditional charter schools also have diverse enrollments, with some being as much as 100% enrollment outside of their host district. The schools in the CMU portfolio are geographically dispersed across Michigan, with the majority of the schools in southern Lower Michigan. 27% of students in CMU authorized schools are from Detroit City School District, while only 15% of the schools are located within the Detroit City School District (their host district). Overall, 49% of students enrolled in CMU authorized schools are from the charter schools' host districts, with 51% residing outside of the charter schools' districts.

Below is a map that represents the schools authorized by CMU. The colored areas represent the area of high saturation based on enrollment of the charter schools. Although it does not show all students enrolled (student enrollment is state-wide), it illustrates the general regions of Michigan where the charter schools are located and the overall radius of student enrollment (excluding cyber charter schools).



*Figure 1.* Schools authorized by CMU, including enrollment saturation.

### **How are school districts in Michigan determined?**

The public school system in U.S is governed by the state through its own set of rules. The state has school districts and which contains publicly elected or appointed members in a school board who operate the schools in their respective districts. Traditional public schools provide free access to education as they are funded and run by the local governments.

In 1809 Judicial districts levied taxes and the public schools were created. The public schools were operated with the support of taxes levied on the judicial districts. Twenty years later The territorial council gave the state right to supervise schools (MDE, 2019). In 1850 the constitution was provided by the State board of education. The present responsibilities of the State Board of Education in Michigan were established by the state constitution in the year 1963 (MDE, 2019).

Michigan has Intermediate School districts (ISD), Regional education service districts (RESA) or regional education service agencies (RESA) mostly at the county level. Even though most of the local school are run by the school districts few educational programs like technical and special education are run by the ISD. In Michigan department of education oversees the public schools districts in the state.

The charter school in Michigan need to receive their authorization from the board of the local district, an ISD or the local college for the state public university. Unlike the traditional school were the local school board has the responsibility of the monitoring compliance and accountability of the traditional public schools for charter schools it is the chartering institution who has the a major responsibilities of the school. At present Michigan has 587 school districts which serves 1,555,370 student (MDE, 2019). For the year 2015-2016 there were estimated 330 charter schools that had enrolled 149,100 students in Michigan (MAPSA, 2016).

### **Conceptual Framework**

One of the key questions this paper seeks to address is “What are the appropriate ways to measure charter school performance, as compared to traditional public schools?” Because charter schools are public schools they are required by law to collect certain student information and participate in state-required assessments (ECS, n.d.). Therefore, there is a common source of student data among all charter schools that can be used to compare students and determine specific school performance. These data are the same for both charter and traditional schools, so running student performance comparisons is very straightforward. The central argument made in this paper; however, is that although this approach is appropriate when comparing traditional public schools with one another, it gets more complicated when comparing charter schools (either charter to traditional or charter to charter). A key flaw in this methodology is the issue of

school enrollment boundaries: charter schools do not have the same enrollment boundaries as traditional public school districts.

### **School Enrollment Geographical Boundaries**

Traditional public school districts have limited geographic enrollment boundaries. Similar to governmental divisions into county, they encompass a much smaller geographical area within the state. Most states either use the county boundary as the school district boundary, or have established unique geographical school district boundaries, sometimes called resident districts (Dhar & Ross, 2011). Because district boundaries are homogeneous, or within a confined set of possible students, there is less variability among the student demographics within a given district, and even more so for a given school. The concern when comparing traditional districts to traditional districts is about differences in other districts' student demographics, such as race/ethnicity, special education status, and socioeconomic status, in addition to school size, but these factors can be isolated when running school comparisons.

Charter schools have a unique geographical enrollment boundary that is based on the jurisdiction of its authorizer. Called the authorizing district, a charter school can only enroll students from the geographical area that is dictated by the authorizer. In Michigan, state legislation dictates that the authorizers district boundaries is the same as their own enrollment boundary: local education agency (or school district), community colleges, and intermediate school districts all have set authorizing districts which are smaller than the state's geographical area. Only state universities have state-wide authorizing districts. The challenge when comparing charter school performance with the host district or another school program is that the comparison school has different enrollment boundaries, and thus a unique student makeup. A recent trend to address this and create more homogeneous comparisons has been to categorize

schools by school type or what is called a peer institution (a school with similar demographics). This is a more equitable means of comparing one school to another, or apples to apple comparison.

Two of the limitations of using this methodology for charter school comparison is dealing with school size, as most analyses compare charter schools to the entire school district, not just a similar sized school, and students crossing geographical enrollment boundary. School size is an attribute that could be mitigated (use schools not districts for comparison), but the geographic enrollment district factor still creates an issue; lack of homogeneity. Traditional public schools enroll students from close proximity (within a neighborhood) and are mostly the same; students within a community are more or less similar (race/ethnicity, social standing, economic conditions, etc.). The opposite is true for charter schools. Although each school is unique in its student makeup, a key phenomenon is that charter schools draw students from across communities and are typically more heterogeneous in makeup (NCES, March 2018). Although not as big of a challenge in larger urban settings (which the opposite is true), finding a comparison charter school in most communities is difficult. Therefore, a comparison methodology that combines both the challenge of addressing student demographics differences, as well as the enrollment district concerns, is needed.

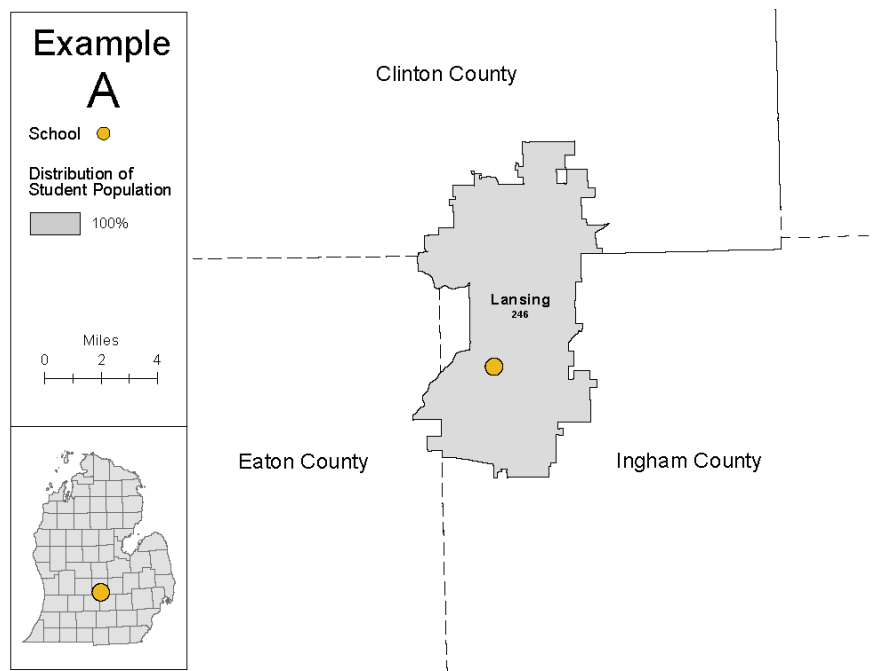
### **Example School Enrollments**

#### Example A

When considering what an enrollment district looks like, most people think of a traditional district where all students are located in the resident district (the district where the school resided). Although charter schools in Michigan have an enrollment district of the entire state, there are some schools that only enroll students from their host district (by chance, not by

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design). An example charter school that enrolls all of its students from the host district is presented below (Figure 2). This school enrolls a total of 246 students, with 100% of students residing within the host district that the school is physically located in and 0% of students residing in neighboring districts. Therefore, a host district comparison would account for 100% of the representative student body. Although this scenario does exist, it accounts for only a small number of charter schools that have this same occurrence. The following table shows the demographic information for charter school A and the host district:



*Figure 2.* Full-host district enrollment: School enrollment fully comprised of students inside the host district.

Table 5.

*Percent of English language Learners, Free and Reduced Lunch, Special Education, Non-white students for charter school A and the host district*

<b>Demographic</b>	<b>School A</b>	<b>Host District</b>
English Language learners	0%	17%
Free and Reduced Lunch	98%	69%
Special Education	11%	17%
Non-white	100%	75%

### Example B

The example school that represents a typical program authorized by CMU is presented below (Figure 3). This school enrolls a total of 413 students, with 22% of students residing within the host district that the school is physically located in and 66% of students residing in 28 neighboring districts. Therefore, a host district comparison would account for only 22% of the representative student body. The following table shows the demographic information for charter school B and the host district:

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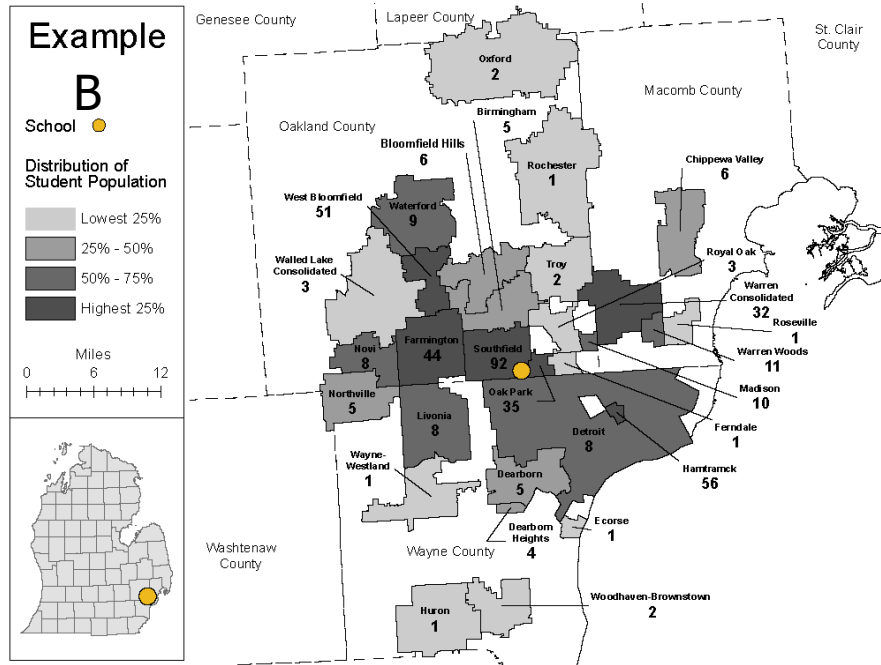


Figure 3. Typical enrollment: School enrollment comprised primarily of students from the host district, but also surrounding districts.

Table 6

Percent of English language Learners, Free and Reduced Lunch, Special Education, Non-white students for charter school B and the host district

Demographic	School B	Host District
English Language learners	31%	4%
Free and Reduced Lunch	24%	56%
Special Education	5%	14%
Non-white	3%	97%

Example C

In contrast to Example B, Example C represents a program that enrolls few, if any, students from the host district, with the majority of its enrollment from other districts (Figure 4). This school enrolls a total of 272 students, with 0% of students residing within the host district that the school is physically located in and 100% of students residing in neighboring districts.

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Therefore, a host district comparison would account for 0% of the representative student body.

Although this scenario is not common, it does occur and provides support for an alternative measure of comparison other than the host district. The following table shows the demographic information for charter school C and the host district:

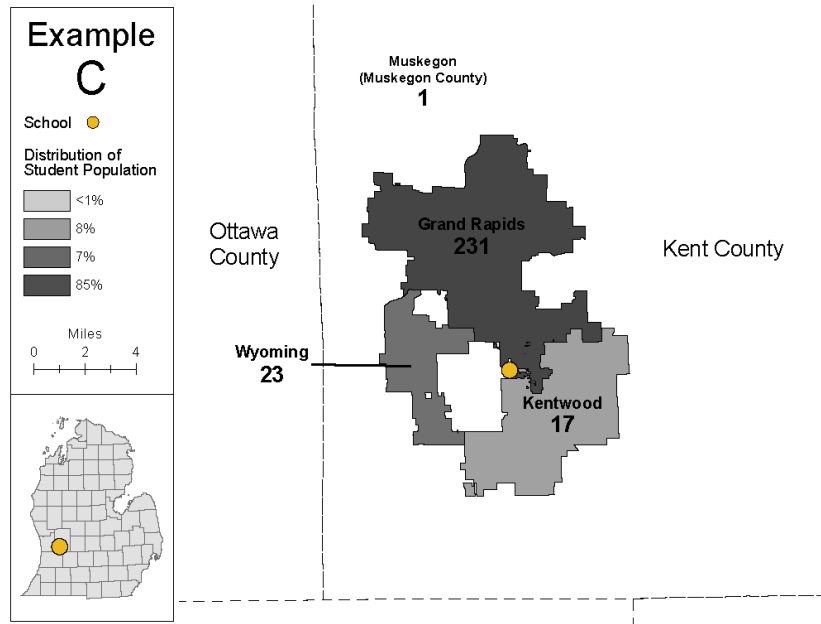


Figure 4. Non-host district enrollment: School enrollment fully comprised of students outside the host district.

Table 7

Percent of English language Learners, Free and Reduced Lunch, Special Education, Non-white students for charter school C and the host district

Demographic	School C	Host District
English Language learners	13%	26%
Free and Reduced Lunch	64%	78%
Special Education	10%	15%
Non-white	85%	80%

Example D

Another example that represents an extreme scenario, Example D, is a cyber charter school (Figure 5). This example enrolls a small percentage of students from its host district, and the majority of its enrollment from other districts, which is presented below. This school enrolled a total of 781 students, with 0.3% of students residing within the host district that the school is physically located in and 99.7% of students residing in neighboring districts. Therefore, a host district comparison would account for less than 1% of the representative student body. Similar to Example C, this scenario is not common as there are currently few cyber charter schools; however, cyber schools make up a large percentage of charter school enrollment. Therefore, this is an important factor in determining school performance and provides additional support for an alternative measure of comparison other than the host district. The following table shows the demographic information for charter school D and the host district:

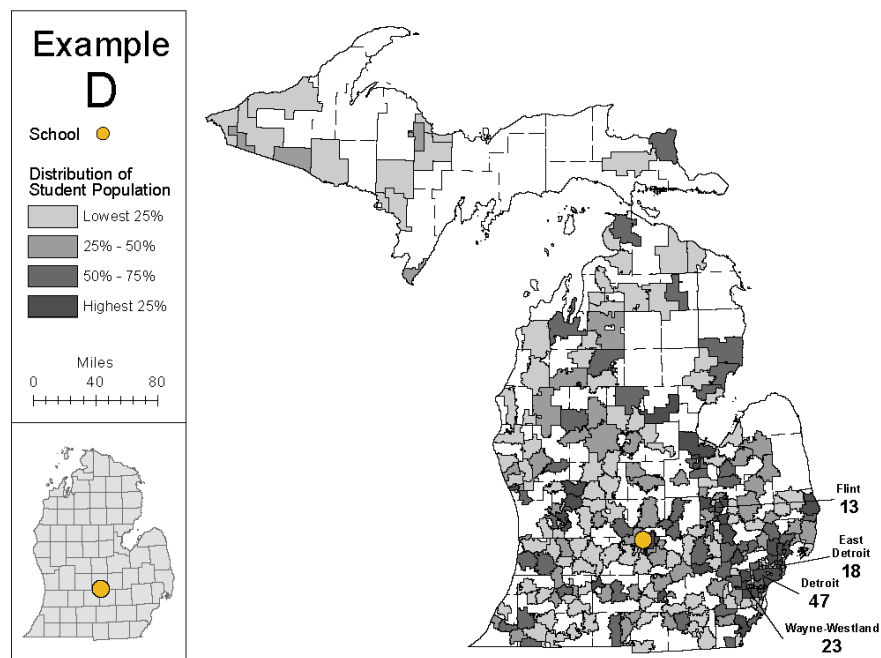


Figure 5. Online charter school: School enrollment from across the state of Michigan.

Table 8

*Percent of English language Learners, Free and Reduced Lunch, Special Education, Non-white students for charter school D and the host district*

<b>Demographic</b>	<b>School D</b>	<b>Host District</b>
English Language learners	1%	12%
Free and Reduced Lunch	67%	78%
Special Education	15%	18%
Non-white	34%	98%

### **A New Model: The Composite Resident District**

The concept of creating a new, mock school using the weighted average of where the students come from, is one such approach. Not only can this new school, a composite of the districts where students reside (or composite resident district), be used to compare student performance, it is also a way to compare the demographics of the school in relation to other similar schools. Is the school being assessed similar in characteristics to that of where the students come from, in addition to the district or schools in close proximity? Most educators would agree it is inappropriate to compare unlike populations, so creating a more heterogeneous comparator ensure consistency when looking at similar students and comparing their performance.

Using statewide longitudinal data, The Governor John Engler Center for Charter Schools has developed a methodology which represents a charter school's student population in a proportionately-weighted average of those traditional public school districts which their students would otherwise attend. This Composite Resident District (CRD) analysis is an improvement over using school location as the criteria for determining a comparison district. The CRD

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methodology was created to compare the performance of CMU schools with the performance of the traditional public schools from where the students who attend CMU schools come from.

Specifically, the CRD is a statistically weighted average of all the districts from which the academy's student population is drawn, also known as the students' resident district. The rationale for having CRDs is that they provide a platform to compare how students in CMU schools are performing relative to students in the traditional public school districts that students would be attending if they were not enrolled in a specific charter school. Because there are disproportionate numbers of students that come from different traditional public school districts that are enrolled in a specific charter school, it makes sense to compute a weighted average. This helps to ensure that the academy is compared to an appropriately weighted performance standard. Stated differently, a high influence on average proficiency rates for a given CRD should be due to traditional public school districts that have most students enrolled in a given academy.

Prior to the 2015 M-STEP, calculations for CRD percent proficiency rates were based upon the school-wide percent of students and the proficiency rates of the different traditional public school districts that make up a given school's CRD. The average CRD proficiency rate was a combination of proportions of students from different resident districts and their proficiency rates in those districts — each grade and subject used the same ratio. For example, if a given school's population is made up of 50 percent of students with a Flint resident district, 30 percent with Grand Blanc and 20 percent with Davison, then the test proficiency rates from those three districts would be weighted accordingly in the CRD. The downside of this methodology was that it treated each academy as though it had a consistent resident district make-up across all

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grades and subjects in the academy. In fact, the resident district enrollment proportions within any given academy can vary greatly by grade level and subject.

In order to address inequality in enrollment and the proficiency rates at different grade levels issues mentioned above, a new methodology was implemented in 2015. Using this methodology, each grade and subject has a unique ratio based upon the resident district composition of that group. For example, if a given school's third-grade mathematics population is made up of 50 percent of students with a Flint resident district, 30 percent with Grand Blanc and 20 percent with Davison, then the test proficiency rates from those three districts would be weighted accordingly in the CRD average proficiency rate. Each grade and subject would be calculated using the specific ratio for that grade and subject.

In addition, the current overall CRD for an individual CMU school, or for all CMU schools combined, is calculated in the exact same manner as the individual grades and subjects, meaning it is a weighted average proficiency rate for all the districts from which CMU's student population is drawn based upon how many total students are enrolled from those districts. Using statewide longitudinal data, a proxy district was developed using a statistical analysis that represents a charter school's student population as a proportionately weighted average of those traditional public school districts their students would attend. This Composite Resident District (CRD) analysis is a more accurate comparison than using resident district scores to measure a charter school's performance because it is representative of the students who are enrolled in the charter school.

**Comparing Schools using the Composite Resident District.**

Comparing charter schools to traditional schools is like comparing apples to oranges, for many reasons. From factors such as funding, taxation, operational structure, state, authorizer, or

local regulation, oversight, transportation, special education services, and building and facilities, a charter school differs not only from traditional public schools but also other charter schools. As illustrated above, the enrollment trends from charter schools can be anything from 100% enrollment from the host district to 0% from the host district to anything in between. Therefore, having an approach to providing additional consistency when comparing school performance of different school models is critical.

Creating a weighted average of the districts (or CRD) students would have attended, whether charter or traditional, provides a more level playing field for looking at school performance, in addition to school demographics. In the state of Michigan all public school students in grades 3 through 11 take a state-administered standardized assessment, the Michigan Student Test of Educational Progress, or M-STEP. The M-STEP is administered annually in the spring to grades 3 through 8 in order to measure knowledge of Michigan's academic standards in English Language Arts (ELA), mathematics, science, and social studies. High school students in grades 9 through 10 take the PSAT in ELA and mathematics, with students in grade 11 taking the SAT in their junior year (also ELA and mathematics).

Many individuals and organizations look to these results to evaluate overall school performance, as well as to compare various programs. Specifically, programs that are similar or near one another (neighboring schools or districts). As presented in this paper, a straight score does not account for the variance in student enrollment and geographical dissimilarities. Using the CRD accounts for these differences and provides a more accurate score in which to compare schools and districts. This model not only works for comparing charter schools to traditional schools but also charter schools to other charter schools and traditional schools to traditional schools who participate in schools of choice.

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A criticism of this model may be that “students are students” and there is no need to account for where the student(s) reside. At face value, this notion is a logical argument for the responsibility of a school to produce high performing results for ALL students, no matter where the student comes from. Although this is a valid argument for considering a school or district’s responsibility to the students in which they enroll, it does not account for the comparison discrepancies between districts. As noted previously in this paper, there are significant differences of the aggregate performance from communities across Michigan. It would be inappropriate to compare different demographic students to one another, outside of the general value of determining an overall view of the state’s performance, or to identify gaps and areas of concerns. To compare two districts who have different student demographics straight up poses serious professional and ethical considerations.

### School Comparison

In order to illustrate the effectiveness of this approach, a school comparison is presented below. The example includes both a comparison of the charter school to a host district, as well as a comparison of the charter school to the school’s CRD.

Table 9

*Comparison between local district and CRD on student performance (M-STEP/SAT)*

School Year	Subject/Grade	Academy	Local District	CRD
2015-2016	ELA 3	85.2%	37.3%	44.0%
2015-2016	ELA 4	92.9%	34.9%	41.1%
2015-2016	ELA 5	80.8%	36.7%	35.8%
2015-2016	ELA 6	75.9%	28.2%	41.1%
2015-2016	ELA 7	56.3%	32.7%	39.3%
2015-2016	ELA 8	64.5%	30.8%	41.7%
2015-2016	ELA 11 (SAT)	59.5%	37.7%	50.1%

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2015-2016	Math 3	74.1%	31.1%	44.9%
2015-2016	Math 4	96.4%	20.4%	34.9%
2015-2016	Math 5	57.7%	10.2%	19.1%
2015-2016	Math 6	41.9%	11.9%	28.4%
2015-2016	Math 7	34.4%	13.7%	27.5%
2015-2016	Math 8	32.3%	17.8%	26.1%
2015-2016	Math 11 (SAT)	29.7%	12.1%	27.3%

For this school, the percent of students who are proficient or advanced is higher than that of the local district in both math and ELA for every grade level. In addition, the school outperforms the composite resident district in math and ELA for all grade levels. Clearly, the school outperforms the local district more than it does with the composite resident district except for 5<sup>th</sup> grade ELA where the local district percentage is higher than the composite resident district.

### Summary and Conclusion

Comparing two groups (students or schools) is a fundamental aspect of oversight and accountability, and it is no different when evaluating school performance. With schools of choice and charter schools, comparing schools to one another is problematic due to the enrollment districts not being the same, or even similar. Using a weighted average, or a CRD, to establish a more level measure creates a more accurate manner in which to compare two schools performance. The CRD establishes a new comparison district, or proxy district, in which to make this comparison more accurate. Additionally, it not only supports student performance data, but it also gives a holistic picture of the student makeup of the schools and districts' demographics. Thus, authorizers, districts, state departments of education, legislators, and the public can have a more accurate picture of how schools are performing; charter or traditional.

## References

- Berends, M., Springer, M.G., & Walberg, H.J. (Eds.). (2008). *Charter school outcomes*. New York: Lawrence Erlbaum Associates.
- Betts, J., & Hill, P. T. (2006). *Key issues in studying charter schools and achievement : A review and suggestions for national guidelines*. Seattle, WA.
- Betts, J. R., & Tang, Y. E. (2011). The effect of charter schools on student achievement: A meta-analysis of the literature, 74.
- Bulkley, K. E. & Fisler, J. (2002). A review of research on charter schools. *Consortium for Policy Research in Education*: University of Pennsylvania, Graduate School of Education.
- Center for Research on Education Outcomes (CREDO). (2015). *Urban charter school study*. Center for Research on Education Outcomes (CREDO). (2019). *Charter school performance in Ohio*.
- Dhar, P. & Ross, S. (2011). School district quality and property values: Examining differences along school district boundaries. *Journal of Urban Economics*, 71(1), 18-25.
- Education Commission of the States (ECS). (n.d.). *50-state comparison: Charter school policies*. Author. retrieved from [www.ecs.org](http://www.ecs.org).
- Finn, C. Jr., Manno, B., & Vanourek, G. (2000). *Charter schools in action: renewing public education*. NJ: Princeton University Press.
- Hoxby, C. M. & Rockoff, J. E. (2005). *The impact of charter schools on student achievement*.
- Jankens, B. P., Weiss, L. S. (2017). The impact of charter schools: A review of current research. *International Journal of Educational Reform*.
- Lopez, F. (2014). *Review of a meta-analysis of the literature on the effect of charter schools on student achievement*. Boulder, CO.
- Maul, A., & McClelland, A. (2013). *Review of National Charter School Study 2013*. Boulder, CO: National Education Policy Center.
- Mead, S. (2006). *Maintenance required: Charter schooling in Michigan*. Education Sector Reports: Charter School Series.
- Michigan Department of Education (MDE). (2016). *Grade Level Content Expectations*.
- Michigan Department of Education (MDE). (2017). *Department of Education Improvement and Innovation: Charter Public Schools*.
- Michigan Department of Education (MDE). (2019). *MI School Data*. Retrieved from <https://www.mischooldata.org>.
- National Alliance for Public Charter Schools (NACPS). (2016). *A closer look at the charter school movement*.
- National Center for Educational Statistics (NCES). (March 2018). *Public Charter School Enrollment*. Author. Retrieved from <https://nces.ed.gov>.

Thiele, T., Singleton, A., Pope, D., & Stanistreet, D. (2014). Predicting students' academic performance based on school and socio-demographic characteristics. *Studies in Higher Education, 41*(8) 1424-1446.

# CALL FOR PAPERS

## THE CHARTER SCHOOLS RESOURCE JOURNAL

**The Charter Schools Resource Journal** (TCSRJ) is a blind, peer reviewed on-line publication that welcomes submissions from educators involved in teaching, learning, and professional development of teachers of both charter and non-charter schools.

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**TCSRJ** welcomes manuscripts (1,000-6,000 words) describing effective administrative or instructional projects with a local, regional, state, national, or international scope. Manuscripts should address instructional models, innovations, and best practices in preK-12 schools and classrooms for classroom practitioners and school leaders.

### Submission Guidelines

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- c. Use APA format (6<sup>th</sup> ed.).
- d. The content of the manuscript should be timely.

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