

A Secondary Analysis of MME and ACT Data among Wayne County Traditional Public Schools and Public School Academies

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Background

- Nationally, on average, charter school students trail traditional public school (TPS) students on academic growth by .01 standard deviations in reading and by .03 standard deviations in math (National Charter School Study, 2009)
- Ni (2007) noted the long-term effects of TPS who had faced charter competition in Michigan were negative; in fact, a traditional public school facing long-term charter competition for more than 6-years was estimated to decrease its 4th grade math satisfactory rate by 4.24% points

Background cont.

- According to the Public School Academies (PSAs) Michigan Department of Education Report to the Legislature (2008), high school performance in PSAs is an area in need of targeted and intensive improvement
- Smith & Stuit (2009) found the chances of a PSA teacher leaving the profession versus staying in the same school were 130% greater when compared TPS teacher. In addition, the likelihood of moving schools compared to staying is 76% greater in PSAs versus TPSs.

Background cont.

- On average, PSA teachers' salaries were \$16,192 less than Michigan's average statewide TPS teacher salary (Public School Academies MDE Report to the Legislature, 2008)
- Burian-Fitzgerald (2005) noted that a teacher in a TPS had reached a maximum salary at the end of his/her career, however, a PSA teacher with ≥ 25 -years of experience would receive a salary decrease at the end of his/her career
- Shane (2010) reported that approximately 70% of PSA teachers were not enrolled in the Michigan Public School Employees Retirement System (MPSEERS)

Background cont.

PSA MDE Report to the Legislature (2008) states the primary purpose of Michigan PSAs is to:

- Improve pupil achievement for all pupils by improving the learning environment
- Stimulate innovative “teaching methods”
- Create new professional opportunities for teachers
- Achieve school accountability for pupil educational performance by placing full responsibility for performance at the school site level
- Provide parents and pupils with greater choices
- Determine whether state educational funds can be more effectively, efficiently and equitably utilized

Background cont.

- The MDE (2010) *Race to the Top* plan requests \$526 million to implement a plan to:
 - Increase student achievement
 - Close the achievement gap
 - Increase high school graduation rates
 - Increase the number of college graduates
 - Allow high-quality charters to become Schools of Excellence
 - Open one new charter school for each School of Excellence
 - Open ten Schools of Innovation to be run by high-performing charter operators

Background cont.

MME evaluates Student Achievement and it is measured by:

1. ACT plus writing

- ACT.org states data from the ACT is used for:
 - Academic advising and counseling
 - College recruitment
 - Admissions & course placement
 - Scholarships & special recognition
- According to the ACT National Report for 2009:
 - Minimum ACT benchmark scores are needed on each subject area test to indicate a 50% chance of obtaining a B or higher in college courses

Background cont.

2. WorkKeys

- ACT.org states that WorkKeys is used by businesses, workforce development groups, and schools to find, hire, train, and retrain qualified employees
- Measures skills that employers believe are critical for job success:
 - Applied technology information
 - Applied mathematics
 - Business writing
 - Listening
 - Reading for
 - Teamwork & writing
 - Observation
 - Locating information

3. Michigan specific assessments in mathematics, science and social studies

Research Purpose

- To determine if PSAs will help Michigan compete for *Race to the Top* funding
- To compare academic achievement of TPSs to PSAs over a 3-year period
- Describe statistical features within the MME and ACT test data over a 3-year period

Methods

- Participants
 - Grade 11 students in Wayne County PSAs and TPSs
- Design
 - Between Groups
- Materials
 - MDE website
- Procedure
 - ACT and MME (English and Math) test scores from 2007-2009 were abstracted from the MDE website and analyzed using SPSS Version 18.0 and MS Excel

Results

- MME and ACT Test Score Progress for 2007-2009
 - Increase in MME Math & English proficiency scores
 - Increase in ACT Composite scores
- Adequate Yearly Progress (AYP)
 - TPSs met Math and English AYP standards over 2007-2009
 - None of the PSAs met MME Math and English AYP standards over 2007-2009
- State and National ACT Composite Averages
 - TPSs:
 - Met the ACT State and National Composite averages over 2007-2009
 - PSAs:
 - None of the ACT Composite National or State averages were met

Results cont.

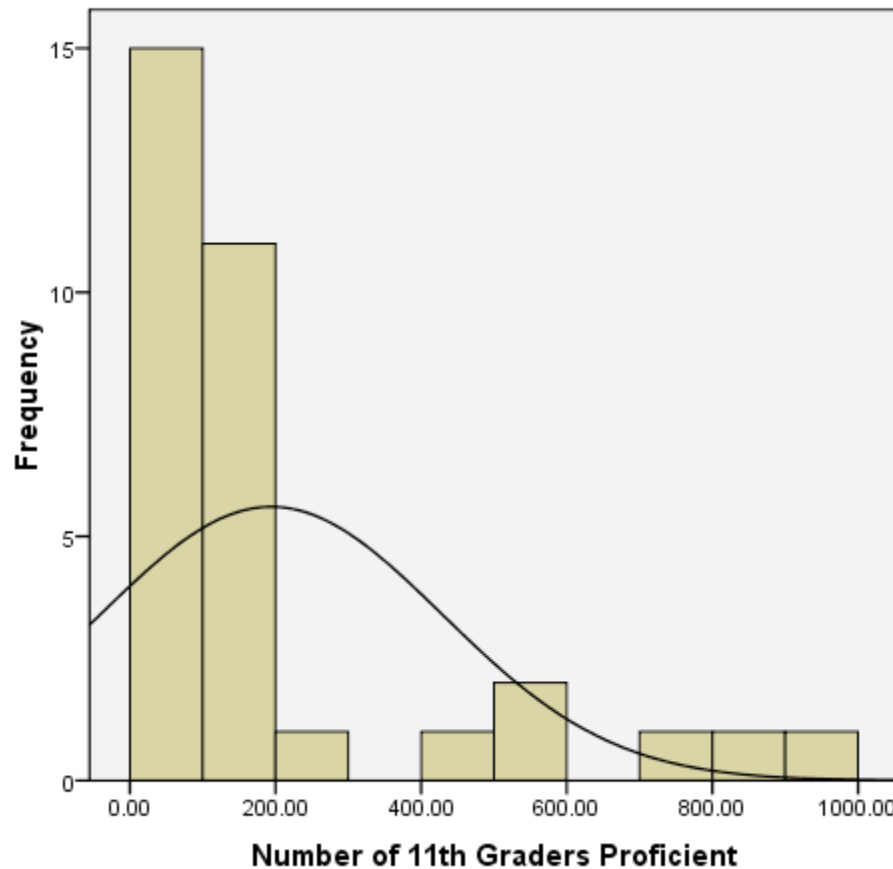
- National ACT Composite, Math & English Benchmark Scores
 - TPSs:
 - National ACT benchmark scores for Composite, Math & English were met
 - PSAs:
 - None of the National ACT Composite & Math benchmark scores were met
 - Only 1 PSA (2.27%) on average met the National ACT English benchmark over 2007-2009
- U-Curve Data Patterns

Results cont.

- According to Brown (1997):
 - Values of 2 standard errors of skewness (ses) or more, regardless of the sign, are most likely skewed to a significant degree
 - Square root of $6/N = ses$

Results cont.

Wayne County Public School Districts - Number Proficient for MME Math 2009

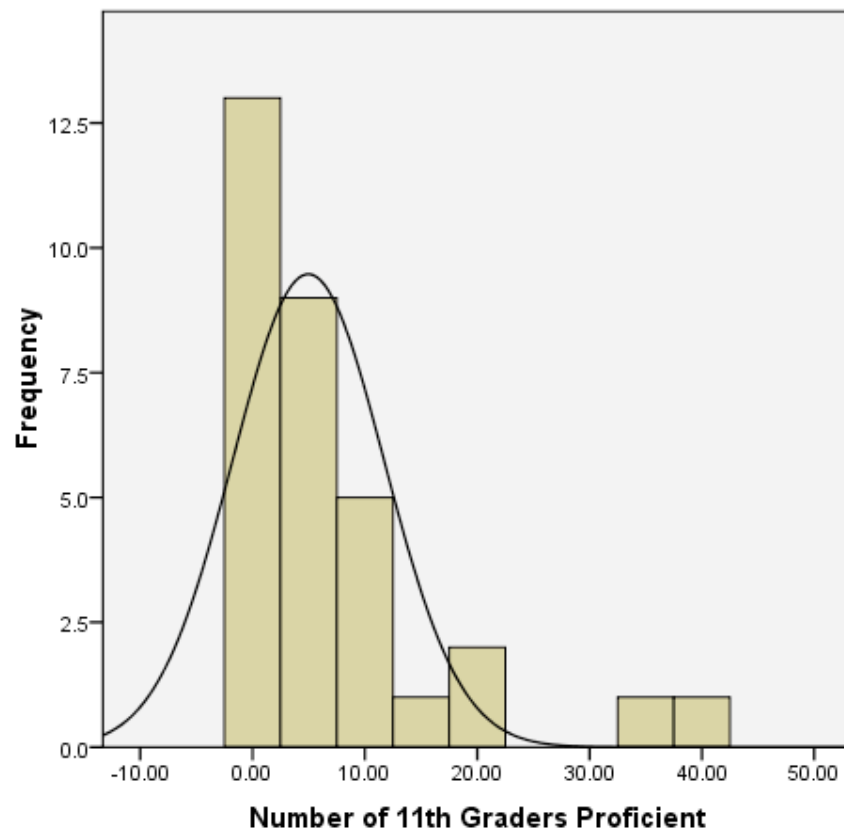


Mean =197.03
Std. Dev. =241.681
N =33

ses = .409
skewness = 1.975
Positively skewed (.818
)

Results cont.

Wayne County Public School Academies - Number Proficient for MME Math 2009



Mean = 7.44
Std. Dev. = 9.625
N = 32

ses = .414
skewness = 2.198
Positively skewed (.828
)

Discussion

- According to the data:
 - None of the PSAs met MME Math and English AYP standards over the 3-year period
 - None of the PSAs met the National or State ACT Composite and Math averages over the 3-year period
- PSAs should operationally define the following:
 - *What is an improved learning environment?*
 - *What are innovative teaching methods?*
 - *What are new professional opportunities for teachers?*
 - *What are the accountability measures for pupil performance?*
 - *How will utilization of state educational funds be measured?*

Discussion cont.

- Recommendations
 - Earl & Katz (2006) state that many school leaders find themselves caught in a “data dilemma”. They mistrust data, they fear data, and many do not have the skills to use data wisely and effectively.
 - Policy makers in Lansing, Michigan need to become more familiar with education achievement data
- Limitations
 - A cohort was not identified. Future research should analyze cohort test data from student data warehouses such as, Data Director, Data Wise and Pearson Benchmark Inform, to name a few.
 - Test score data was not published by all of the Public School Academies

Discussion cont.

- Poorly performing TPSs have been identified as high priority and are being given attention
- If PSAs continue to not meet AYP standards, should MDE apply greater oversight to the PSAs?

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References

The Psych Info, Wilson SelectPlus, ERIC, PsycArticles, Academic OneFile , Michigan Department of Education and Google databases were abstracted using the key words: charter, schools, student achievement, and Michigan from January 1, 2005 to April 20, 2010

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Questions?

Thank You

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