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Raising Academic Achievement in Michigan's K-12 Schools

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April 12, 2001

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Prepared for

Michigan State Board of Education
Lansing, MI

**RAISING ACADEMIC ACHIEVEMENT IN
MICHIGAN'S K-12 SCHOOLS**

Kevin M. Hollenbeck

Good morning! I'm Kevin Hollenbeck, and I very much appreciate the opportunity to share with you some of my thoughts and research about approaches that may be fruitful in improving K-12 education in Michigan. I want to recognize and applaud the Board's approach in tackling the very difficult challenges involved in improving our schools, especially monitoring and intervening with underperforming buildings. I believe that your approach of thoughtful and informed research and discussion before wading into the fray will enhance the likelihood of setting policy directions that will succeed and improve the lives of students.

The structure of my prepared remarks is as follows:

1. Personal Background
2. Student Achievement Research Findings
3. Recommendations and Rationale

I hope to spend most of my time on the final area.

Personal Background

Professionally, I am currently a Senior Economist and Publications Director for the W.E. Upjohn Institute in Kalamazoo. I am also an Adjunct Associate Professor of Economics at Western Michigan University. I have been in these positions since July 1989. Prior to moving to Kalamazoo,

- o MEAP Results and Poverty in Schools in Southwestern Michigan
- o Test Score Differentials by Race
- o Student Achievement and Competitive Incentives
- o Student Achievement and Charter Schools in Michigan

I would like to share some of the research findings from these studies with you.

Southwest Michigan study. In 1998, Kalamazoo County hired an urban specialist named David Rusk to come and study the county and make recommendations about economic development. Staff at the Upjohn Institute did a lot of analyses for him, and in particular, I looked at MEAP scores in elementary schools in Southwest Michigan. What I found was a very profound relationship between scores and poverty (as measured by free or reduced price lunch eligibility.) Look at the graphs in figures 1 - 8. These graphs are scatterplots of the relationships between MEAP test results and poverty (as measured by building-level free or reduced price lunch eligibility) for all schools in Southwest Michigan. The graphs also show the best fit regression line.

Note that there is a strong negative relationship (in fact, I was quite surprised by the statistical strength of that relationship) for all four tests.¹ But also note that there are large number of schools that overperform or underperform (relative to the regression line, which reflects where you would predict the school to be.)

Graph 2 has Kalamazoo County buildings only, and the bolded data points are elementary schools in KPS, an urban district. Note that all of the county's buildings do well, but in particular, there are two buildings in KPS that are way above their predicted scores (more than two standard

¹The graphs show analyses of 1997/98 data, but I have similar graphs that use three-year averages.

race-neutral, then the gap would get smaller simply because of regression to the mean. The third bullet point suggests that we are making some progress over time, and the final bullet point states that the gap is most severe at the top of the distribution, among high scorers.

Let's look at some data from the MEAP for all of Michigan. Figure 10 shows the gaps for 96/97 and 97/98 for 4th grade. The good news is that the gap is smaller than what has been found in other studies. Figures 11 - 13 show the distributions of raw scores. You can readily see that the differences come at the high end of the distributions.

The gaps are persistent by gender (figures 14 - 15), by poverty status (figures 16 - 17), and by the racial composition of the school building (figures 18 - 21). Finally, I tried to see if I could explain the gaps by other characteristics such as building enrollment, pupil/teacher ratios, revenue per student, foundation grants, and so forth. It may be the case that African American students tend to attend buildings with higher pupil/teacher ratios, lower expenditures per pupil, and so forth. This turns out to be true, but not to a large enough extent to fully explain the gap. When I give African American children the average characteristics for white children, I do reduce the gap, although it does not disappear. In particular, this adjustment reduces the gaps by 1/3rd to one-half. (See figure 21.)

What do we know about racial test score gaps? First, Michigan 4th graders seem to have a slightly smaller gap than do other areas or other grades. Second, national studies show that test score gaps exist even at age 6. The explanations that I find most convincing for this gap "at the starting gate" are systematic differences in home environment and resources (books) and differences in pre-school educational opportunities and child development activities. Third, schooling does not seem

of test scores. The fact that more students stayed in school could have been a positive or a negative result. Obviously, if it enhances their learning, then it was positive. However, the teachers' may have reduced their expectations or simplified the curriculum in order to retain students. Furthermore, if those students were disruptive, they may have negatively affected the learning of other students. It may be the case that compensation incentives tied to student achievement may be more successful, we just do not have the evidence. If the Board has an interest in pay for performance compensation schemes, I would recommend that work by Allan Odden at the University of Wisconsin.

A second section of our paper looked at the effect of collective bargaining on student achievement. Some individuals believe that weakening unions is a viable means of improving schools. However, we report in the paper fairly solid evidence that collective bargaining is correlated with higher student achievement (national studies using state variation in collective bargaining.)

The third section of our paper looked at charter schools. Here we used Michigan data on MEAP tests. We carefully extracted data from the statewide MEAP results from buildings in only those districts from which charter schools may draw students. Using data from those buildings and from charter schools, we found that 4th/5th grade students in charter schools scored around 2 - 5 percent lower than students in traditional public schools holding constant poverty levels, pupil/teacher ratios, gender, race, and expenditures per pupil. Students in PSA's with educational management organizations scored lower than other charter schools.

We tried a lot of statistical techniques to explore the strength of the negative relationship. For example, one might argue that charter schools are new, and that their scores will improve over

Recommendations and Rationale

I've shared some research findings with you, but I'm guessing that one of the purposes of your invitation to me is for us to discuss potential directions for public policy and intervention. I have some specific suggestions, but let me start with what I think are principles that I have learned from research and practical Board experiences.

Educational Improvement Principles

1. TANSTAAFL (There ain't no such thing as a free lunch!)

Resources matter. There is great inertia in the system that will take resources to overcome. Resources include time, money, training, public relations, and expertise. I believe that educational improvement is an extremely difficult political issue because it takes resources, affects lots of people, and has long-run outcomes.

2. Corollary: TANSTAASB (. . . a silver bullet!)

Carpenter (2000) pointed out 360 "good ideas" in Phi Delta Kappan between 1987 and 1997. Improvement will require a multitude of initiatives.

3. Improvement can **not** be sold on fear of poor macro-economic outcomes

A Nation at Risk was wrong. U.S. economic performance has been outstanding despite mediocre educational outcomes. Appropriate economic arguments are opportunity cost - economy can and should be stronger because education does matter; and equity - every individual deserves opportunity.

4. Concentrate resources

I am constantly amazed at how optimistic and cheery educators are - remember that economics is the dismal science! School board members and educators can find a silver lining in any cloud. Rarely do I find educators or board members who accept that their buildings or districts are not performing up to standards, or if they do admit this, are willing to invest resources or take the heat that would be required for meaningful change. This suggests to me that school improvement will not emanate from the “inside.”

In my opinion, the legislative or executive branches of the state government have got to take the leadership onus of monitoring school improvement, and be willing to take the heat that comes when you’re the messenger. In my opinion, one of the most devastating consequences of the MDE downsizing is that the agency no longer has the capacity to be a credible monitor of local districts. I know that in the new accreditation model, the ISDs are going to be monitoring school improvement. I like the notion of evaluating school improvement efforts, but I’m not sure ISDs will be willing to monitor effectively their own customers.

An alternative to monitoring and sanctions is contestable markets, and charter schools may offer that alternative. However, in practice, they have not been viable competitors. I would think that negative publicity or consolidation threats would be more viable.

9. The effective schools literature seems to have withstood test of time

We do know what works. Study after study confirm the effective schools literature: Successful buildings have strong visionary leaders, staff consensus about a single or small number of goals, emphasis on professional development/training of staff, and adequate facilities and learning materials.

10. Expertise and resources may be situation-specific

Teaching

3. Targeted, intensive professional development

Districts or the State should support preparation for National Certification. Districts should expect teaching staff to develop a professional development plan, and adherence to the plan should be an element against which teachers are evaluated. Districts and principals should strongly encourage informal training and should facilitate it with common planning time. The Angrist and Lavy (2001) study shows that targeted professional development is much more cost effective than smaller class sizes.

4. Expand pre-service teacher preparation

We might adopt the medical or legal training model, where teachers explore different practices before deciding on their own area. For example, teachers would serve as interns in urban, suburban, and rural sites. Secondary teachers would go to middle schools and high schools. Elementary would try out early elementary as well as upper elementary grades.

5. Expand alternative certification schemes/ relaxing tenure

Looming shortages should be addressed, and one idea would be temporary certifications for individuals who have related occupational experiences (postsecondary teaching) or who have taught in other states. Protections against arbitrary and capricious dismissals are certainly warranted, but automatic job stability for burned out, ineffective teachers is not in the interest of students or good teachers.

Curriculum

6. Support and participate in national alignment and adjustment studies such as ACHIEVE

achievement disincentives. Most students will be accepted into the university/college of their choice no matter what their gpa or test scores. Only students aspiring to first-tier institutions have the incentive to work hard. I think the MEAP scholarships are a good step in the right direction. I would consider tying tuition subsidies to test results and gpa. And to increase their target efficiency, I might implement these things on a sliding income scale.

I know that I did not address a lot of specific issues. I did not mention some of them because I am unaware of them or have not studied them or thought about sufficiently to have an informed opinion. However, I deliberately ignored some issues because I am not very sanguine about their prospects. In this latter category are (1) mandated parent involvement—we need parent awareness, support, and buy in, but not mandated involvement; (2) adult mentoring—having adults provide extra resources for a specific task like test preparation sessions or field trips is great; however, non-intensive monitoring or unstructured job shadowing seem empty (see Kindness of Strangers); (3) character education curriculum—like many, I am convinced that there has been a decline in respect in schools, but I believe that good character has to be modeled and rewarded, not explicitly taught; and (4) technology—I am not convinced of the cost effectiveness of its instructional functionality. Certainly, schools need to have Internet access, most especially in media centers and, in a limited way, in classrooms, but I simply doubt that technology is the answer to underperforming schools.

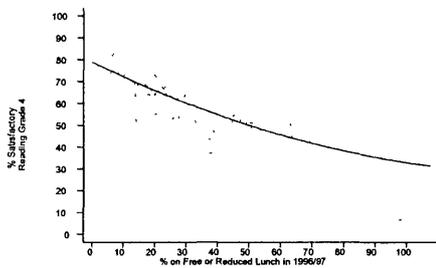
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**Fig. 1 4th Grade Reading Results
Using Most Recent Year's Data**



**Fig. 2 Kalamazoo County 4th Grade Reading
Results Using Most Recent Year's Data**

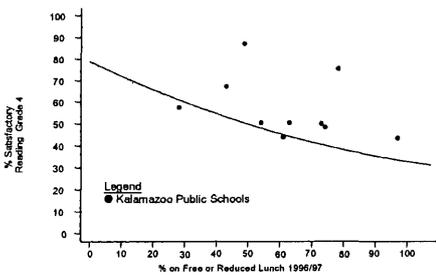


Fig. 6 Kalamazoo County 5th Grade Science Results Using Most Recent Year's Data

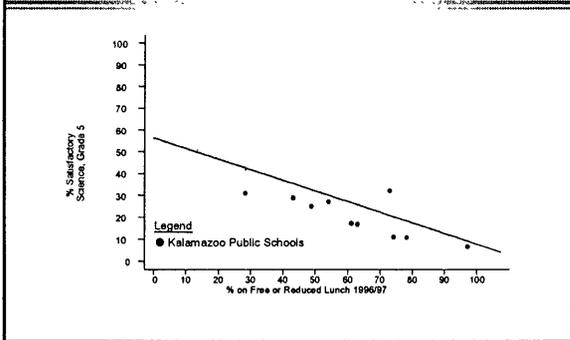


Fig. 7 5th Grade Writing Results Using Most Recent Year's Data

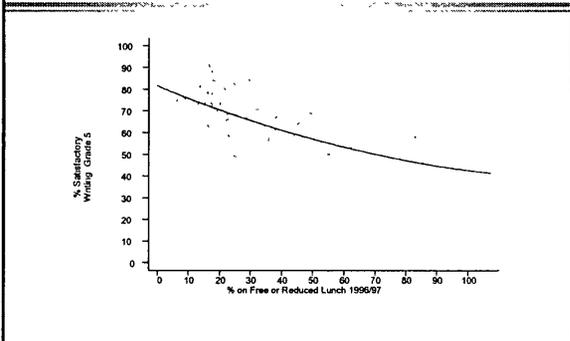


Fig. 8 Kalamazoo County 5th Grade Writing Results Using Most Recent Year's Data

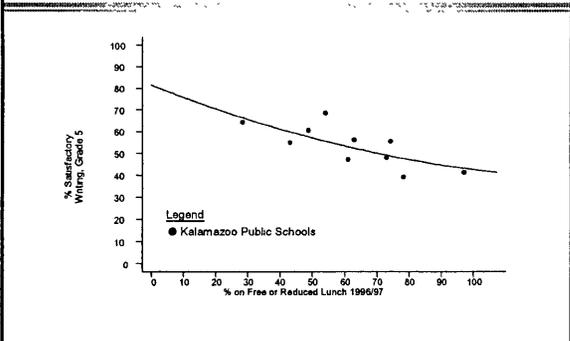
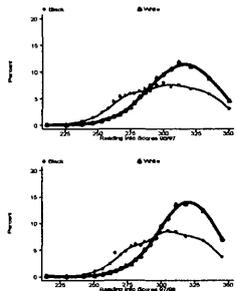


Fig. 12 MEAP Reading (Info) Score Frequency Distribution by Race, 96/97 and 97/98



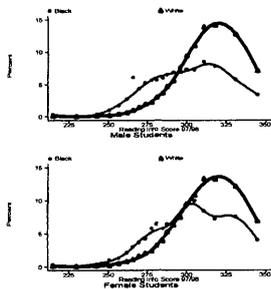
Source MEAP All districts

Fig. 13 Gaps in 4th Grade MEAP Scores, by Gender

| | 96/97 | | 97/98 | |
|-----------------|-----------|-----------|-----------|-----------|
| | Boys | Girls | Boys | Girls |
| Math | 0.61 s.d. | 0.51 s.d. | 0.65 s.d. | 0.51 s.d. |
| Reading (Story) | 0.40 s.d. | 0.40 s.d. | 0.46 s.d. | 0.38 s.d. |
| Reading (Info) | 0.47 s.d. | 0.43 s.d. | 0.63 s.d. | 0.48 s.d. |

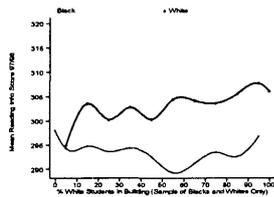
Source MEAP, All districts

Fig. 14 MEAP Reading (Info) Score Frequency Distribution by Gender, 97/98



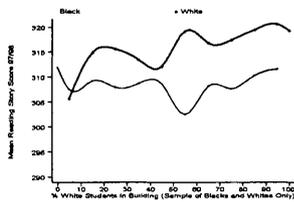
Source MEAP, All districts

Fig. 18 Mean 4th Grade MEAP Reading (Story) Scores by Race, by Percentage White Students in Building



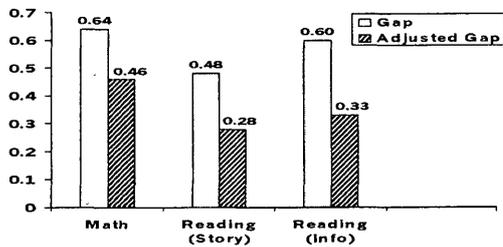
Source: MEAP, All districts

Fig. 19 Mean 4th Grade Reading (Info) Scores by Race, by Percentage White Students in Building



Source: MEAP, All districts

Fig. 20 Gaps and Adjusted Gaps in 4th Grade MEAP Test Scores



Source: MEAP, 77 districts

Specific Recommendations

- Administrative/Governance
 - Support/subsidize administrative leadership training
 - Support training of superintendents, other administrators, and boards in data-driven, continuous improvement management

Specific Recommendations (Cont.)

- Teaching
 - Targeted, intensive professional development
 - Expand pre-service teacher preparation
 - Expand alternative certification schemes/relaxing tenure

Specific Recommendations (Cont.)

- Curriculum
 - Support and participate in national alignment and adjustment studies such as ACHIEVE
 - Accelerate pace or expectations from low performers
