

**Lessons from the Evaluation of the
Michigan School Readiness Program**

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Introduction

The Michigan School Readiness Program (MSRP) has existed as a state-funded preschool initiative for more than 20 years. For half of its lifetime, the MSRP has been subjected to evaluation by the High/Scope Educational Research Foundation. This paper starts by providing a description of the program and its history. It then provides an overview of MSRP child outcome findings from six major studies that were reported between 1997 – 2007 and concludes with implications for future research.

History of Program

The Michigan School Readiness Program provides services to four year olds at risk of school failure. It began as a pilot project in 1985. At that time, 53 programs were funded with the goal of identifying effective early childhood education models that could be taken to scale across the state. Over the past 22 years, the MSRP has grown from serving 8,208 children in its pilot year to 27,530 children in 550 programs in FY07.

The definition of at risk for school failure was established early on in the implementation of the MSRP. In 1988, twenty-five factors were identified as placing children at risk for low educational achievement. That list of 25 factors is still used today to determine if a child is eligible for the MSRP. A child must have at least 2 risk factors to qualify for the MSRP and be four years old by December 1st in the year they are enrolled. Additionally, at least half of the children in a program must be considered low income (defined as a

household income that is less than or equal to 250% of the federal poverty level). The risk factors include:

1. Low Birth Weight
2. Developmentally Immature
3. Physical and/or Sexual Abuse and Neglect
4. Nutritionally Deficient
5. Long-term or Chronic Illness
6. Diagnosed Handicapping Condition (main streamed)
7. Lack of Stable support System of Residence
8. Destructive or Violent Temperament
9. Substance Abuse or Addiction
10. Language Deficiency or Immaturity
11. Non-English or Limited English Speaking Household
12. Family History of Low School Achievement or Dropout
13. Family History of Delinquency
14. Family History of Diagnosed Family Problems
15. Low Parent/Sibling Educational Attainment or Illiteracy
16. Single Parent
17. Unemployed Parent/Parents
18. Low Family Income
19. Family Density
20. Parental/Sibling Loss by Death or Parental Loss by Divorce
21. Teenage Parent
22. Chronically Ill Parent/Sibling (physical, mental or emotional)

23. Incarcerated Parent

24. Housing in Rural or Segregated Area

25. Other (can only apply to 10 percent of the enrolled children)

Table 1 shows the six most common risk factors experienced by MSRP children from 1996 – 2005. Each of those six factors represent at least 20% and in some cases 67% of the children in any given year. Between 1996 and 2005, nearly 80% of MSRP children have been eligible for the program because they have met between two and five of the qualifying risk factors.

Table 1. Risk Factor Trends 1996 – 2005 (% of children enrolled in MSRP)

# Risk Factors	1996 n=19435	1998 n=18831	1999 n=19937	2000 n=24016	2001 n=25198	2002 n=24737	2003 n=25046	2004 n=25087	2005 n=24355	Avg %
Family History of Low School Achievement or Dropout	25.1	31.4	29.8	30.2	27.6	27.2	26.7	27.1	27.5	28.1
Single Parent	41.0	41.6	40.1	38.1	36.7	37.3	37.0	35.7	34.0	38.0
Unemployed Parent(s)	24.2	24.6	21.1	20.1	20.0	22.9	24.5	23.7	23.8	22.8
Low Family Income	67.6	67.2	64.4	62.6	59.1	57.2	58.3	58.2	58.0	61.4
Teenage Parent	20.2	21.4	21.0	22.1	22.5	22.7	23.7	23.5	23.5	22.3
Housing in Rural or Segregated Area	28.6	25.2	30.4	29.4	27.8	30.3	30.0	30.9	29.1	29.1

Description of Program

Administration

The Michigan School Readiness Program is administered by the Michigan Department of Education's Office of Early Childhood Education and Family Services. Within that office three Early Childhood Consultants provide training and technical assistance as well as implementation oversight to a mix of public school and non-profit community based providers. Each Consultant is assigned a region of the state for which she is responsible. Those Consultants report to a supervisor who reports to the department's Director. Every MSRP grantee is required to have an Early Childhood Specialist on staff who serves as a professional development resource to teachers and sometimes functions as the program's Director as well.

There are three primary documents that MSRP grantees are expected to use to guide the administration of their grant, and implementation of the program. Those texts are the state's Quality Program Standards for Preschools and Prekindergarten Programs, Early Learning Expectations for Three- and Four-Year-Old Children, and the Michigan School Readiness Program Implementation Manual.

Funding

When it began, the MSRP was funded through the Department of Education Appropriation Act. In subsequent years to present day, the MSRP receives its funding through the State School Aid Act. Local public school districts, public school academies,

non-profit agencies, and intermediate school districts that also serve as a Head Start grantee are allowed to apply for MSRP funding. School districts and academies are called state school aid grantees and non-profit agencies and Head Start grantee ISDs are called competitive grantees.

The process for obtaining funds for both groups is the similar. A district or organization must demonstrate that it exists within a community that has a concentration of at risk children who are currently not receiving school readiness services. In order to insure that MSRP funds supplement but do not supplant existing services, applicants are required to submit to the state a community needs assessment with their funding application.

Additionally, grantees are required to work in collaboration with Head Start to recruit eligible children. Children who meet Head Start's income requirement must first be referred to Head Start before they can be considered for enrollment in the MSRP.

Once awarded a MSRP grant, a school district or organization remains a grantee for three years. The number of children for whom a state school aid grantee will receive MSRP funding is based upon a formula that takes into consideration rates of free or reduced lunch from grades 1 – 5 in the district and kindergarten enrollment. Competitive grantees request a specific number of slots in their applications but cannot exceed 144. Priority is given to both state school aid and competitive applicants that provide additional child care services beyond the typical MSRP half-day experience.

Grantees are permitted to run classrooms that enroll both MSRP and non-MSRP funded children. That is, blended-funding classrooms are the norm rather than the exception across the state. For example, many classrooms take the form of MSRP – Head Start combinations, MSRP – tuition based combinations, and MSRP – Head Start – Tuition combinations. Blended funding classrooms are required to meet all MSRP program implementation standards (e.g. teacher qualifications, teacher-child ratios).

Figure 1 shows the level of spending per enrolled child that the state has provided grantees to help subsidize service delivery over the history of the MSRP program. Funding per child has slowly risen by less than \$1,000 over seventeen years, from \$2,500 per child to \$3,300 per child. The most recent 2007 State School Aid Act has increased spending to \$3,400 per child and includes the provision that if state revenues are higher than expected in January 2008, that the allocation be increased to \$3,500 per child.

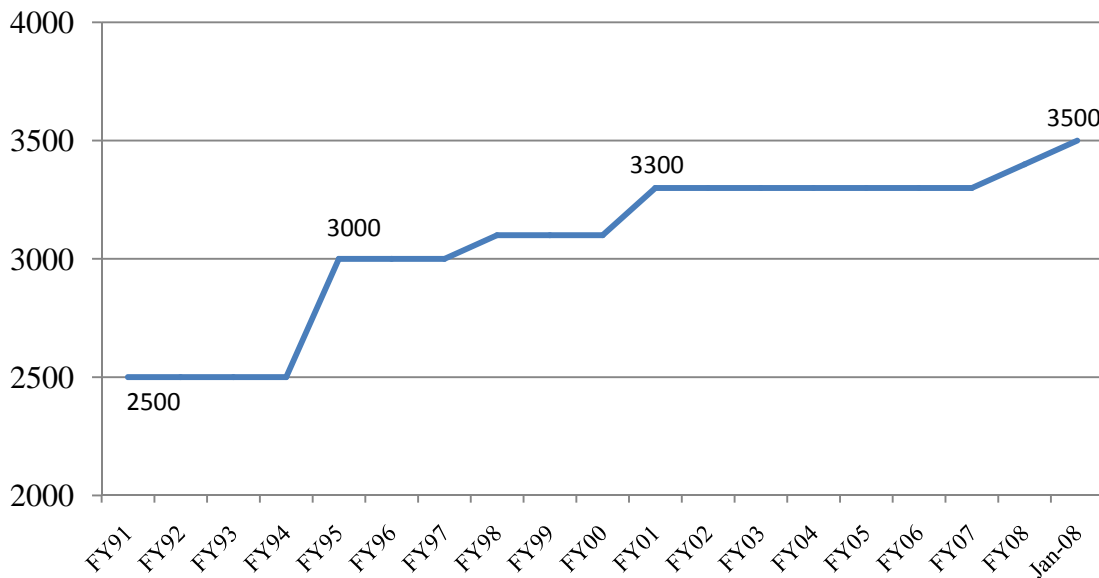


Figure 1. Spending per Child by Fiscal Year

Structure

MSRP grantees have the option to implement three different types of services – center-based, home-based, and parent involvement and education programs. Center-based options include half-day, full-day, all-day/alternate-day, and migrant services. Table 3 provides an overview of the minimum requirements for each of these program options.

Table 2. Minimum Requirements by MSRP Program Option

Program Option	Minimum Requirements
Center-Based : Half-Day	2.5 hours/day, 4 days/week 30 weeks/year 8:1 adult/child ratio Maximum class size = 18
Center-Based : Full-Day	Same length of day as local districts 1 st grade program for at least 4 days/week for 30 weeks/year 8:1 adult/child ratio Maximum class size = 18
Center-Based : All-Day/Alternate-Day	2 full-days per week 8:1 adult/child ratio Maximum class size = 18
Center-Based : Migrant	2.5 hours/day, 4days/week 6 weeks/year 8:1 adult/child ratio Maximum class size = 18
Home-Based	60 minutes/visit, 30 visits/year, 15 group activities/year, 16:1 family/visitor ratio
Parent Involvement and Education	2 home visits and 2 parent-teacher conferences

Of the 1,128 classrooms operating in 2006 - 2007, 79.5% were run by school districts and 98% were center based. There is a difference in the types of services offered by school district and competitive grantees. In particular, school districts provided more full-day options and competitive agencies provided more

home based programs. In both state school aid and competitive grantees, 66% of center-based programs were half-day. In recent history, very few grantees have pursued the parent involvement and education option.

With regards to staffing requirements, Early Childhood Specialists must have at least a Masters degree in Early Childhood Education or child Development. In center-based programs, Lead Teachers must have a valid Michigan Teaching Certificate with an Early Childhood Specialist Endorsement or a valid Michigan Teaching Certificate with a Child Development Associate (CDA) or a Bachelor's degree in Child Development with a focus on preschool. Associate Teachers must have a CDA or an Associate's degree in early childhood/preschool education or 120 clock hours of training from an MDE approved training organization. Home Visitors can have a Bachelor's degree or Associates in child or human development, early childhood education, family life education, parenting or social work, or a CDA.

A consistent trend among Lead and Associate Teachers in center-based program is that those employed by state school aid grantees make more money than their competitive agency counterparts. For example, during the 2006 – 2007 program year, state school aid grantee Lead Teachers reported earning an hourly rate a full \$4.53 more per hour (\$19.73 versus \$15.20) and an average annual salary of \$14,606 more per year (\$48,238 versus \$33,632).

Curriculum

While the Michigan Department of Education does not endorse any particular curriculum, they do encourage their grantees to use researched based, developmentally appropriate curricula. Grantees are also encouraged to select a curriculum that has scope and sequence, develops all domains of a child's knowledge and skills, has learning objectives that align with state standards, uses appropriate materials, includes an instructional approach that has a balance of teacher and child initiated activities and supports child observation as a form of assessment, and includes professional development opportunities. In the MSRP Implementation Manual, the following curricula are listed as examples for grantees to consider: Bank Street, Creative Curriculum, High/Scope, Montessori, The Project Approach, Reggio Emilia, and Theme-based.

Quality of Implementation

The MSRP does have a process in place for on-site reviews of grantees to assess program quality. It involves, a Consultant visiting a site to conduct document reviews, classroom observations, and staff interviews. Due to significant understaffing at the state level, MDE relies heavily on grantees' self-reported data instead of on-site reviews to assess the quality of program implementation. In particular, grantees use the Preschool Program Quality Assessment 2nd Edition (PQA: High/Scope, 2003) as a part of their mid-year reporting. The PQA measures both structural (parent involvement and family services, staff qualifications and development, and program management) and process (learning environment, daily routine, adult-child interaction, curriculum planning and assessment)

quality and was originally developed to align with MSRP program standards. Other self-reported data include yearly Narrative Summaries, and child risk factor reports.

In keeping with the state's preference for developmentally appropriate curriculum and practice, grantees are required to collect child development data. The assessment tools suggested, but not required by the state include High/Scope's Child Observation Record, Creative Curriculum's Developmental Continuum, the Work Sampling System, and the Assessment, Evaluation, and Programming System. All of these assessment tools are observation based.

The state uses all of the self-reported program quality data to plan for statewide professional development activities. Consultants also provide guidance on how grantees can use program and child assessment data to set local staff development goals and inform instruction. A significant challenge to using self-reported data is that it is consistently positive, leaving seemingly little room for improvements. For example, in three most recent mid-year PQA reports, on average grantees gave themselves a score of 4.39, 4.40, and 4.47 out of 5 on the PQA.

Major Findings

MSRP grantees are required to conduct local evaluations of their programs and to follow the progress of their graduates through first grade. The reality is that these local evaluations are of mixed quality and until recently, there was not a way for early childhood programs to enter data into and retrieve data from the state's district wide database. As a result, those local evaluation efforts have been of limited use in determining the effectiveness of the MSRP.

Since 1995, the High/Scope Educational Research Foundation has served as an independent evaluator of the MSRP. In that time, a mix of process and outcome evaluations have been conducted that the Michigan Department of Education has used to understand and improve MSRP implementation and demonstrate the program's ability to influence child outcomes. Groups of MSRP classrooms have been followed over time to help answer questions about differential quality, teacher compensation, and staff professional development. For example, a multi-year study of full-day versus half-day MSRP classrooms found that while full-day classrooms on average were of higher quality than half-day classrooms, there were no differences in the impact of full and half-day MSRP classes on child outcomes (see Jurkiewicz et al, 2004).

This paper focuses on child outcomes first enumerated in several reports to the state of Michigan between 1997 and 2007. They include cohorts of MSRP children that have been followed from preschool attendance through in some cases 8th grade. In particular,

findings from five major projects and a sixth that is in-progress are summarized here. Four of those reports (Early Returns, 1997; Points of Light, 2000; and Effects Five Years Later, 2002; and the 6 – 8th Grade Follow Up Study, 2007) all analyze data collected over time from an original cohort of 596 children (338 MSRP graduates 258 non MSRP) from six districts across the state. The comparison group children were selected based upon two criteria – they did not have a preschool experience and they were low income. Selection of both the MSRP and comparison group took place during the children’s kindergarten year. The fifth project was a collaboration between High/Scope and the National Institute for Early Education Research (NIEER). The sixth project, the MSRP Variation Study, recently completed data collection through 1st grade and analyses are on-going.

The evaluations of the MSRP summarized here have been in line with most of the other state and national evaluations of state-funded preschool initiatives. That is, they have depended primarily on quasi-experimental designs and have found evidence that attending preschool has both short and long term positive outcomes for children (e.g. see Lamy et al, 2006, Schweinhart & Xiang, 2005).

Findings are presented by grade level to help make clear the short and long term program influences that have been found. However, across many of the studies there is a strong finding related to grade retention. As shown in Figure 2, starting in early elementary

school and persisting through middle school, the MSRP group has had a significantly lower rate of grade retention than the non-MSRP comparison group.

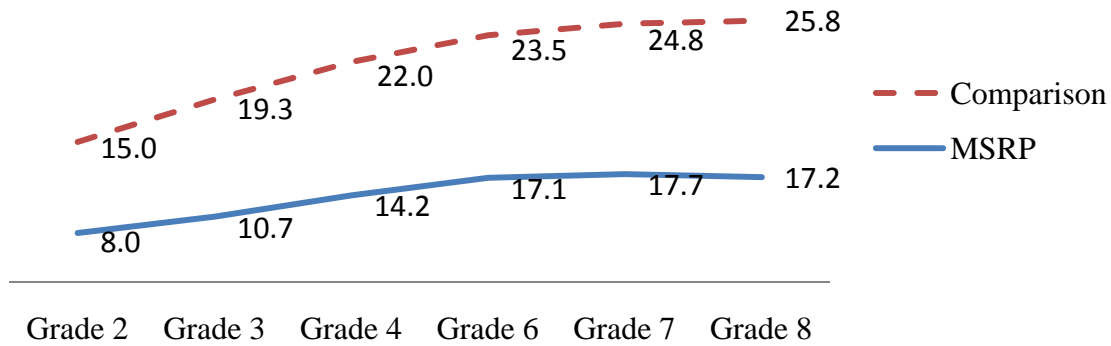


Figure 2. Group Differences in % Grade Retention Over Time

Another consistent finding across all of the studies, is that MSRP children have been found through teacher reports, independent observations, and direct assessments to be more ready for school and to possess more developed language, literacy, and math skills.

Kindergarten

During their kindergarten year, data was collected from the original cohort of 596 children on children's knowledge and skills through observation and kindergarten teacher reports. As reported by Florian et al, 1997, during that kindergarten year, MSRP children were observed to be and rated by teachers as being more developed than the comparison group. That is, MSRP children had higher average scores on all domains of the Child Observation Record for 2 ½ to 6 Year Olds (COR: High/Scope, 1992) (social relations, initiative, language and literacy, music and movement, creative representation, and logic

and mathematics). Kindergarten teachers, who did not know which group – MSRP or comparison – to which children belonged, consistently rated MSRP graduates as being more advanced in being imaginative and creative, showing initiative, retaining learning, completing assignments, and good attendance.

In 2005, High/Scope worked with NIEER to include Michigan in a multi-state evaluation of state-funded preschool programs. Using a regression discontinuity design, data was collected from a statewide sample of 865 children (384 in the preschool group and 481 in the no preschool group). The child assessment tools used included the Peabody Picture Vocabulary Test – III, the Applied Problems Subtest from the Woodcock-Johnson Tests of Achievement-III, and the Blending subtest from the Preschool Comprehensive Test of Phonological and Print Processing. It was found that at kindergarten entry, MSRP attendance increased children’s vocabulary score 6% over average scores, math score 21% over average scores, and print awareness 63% over average scores.

Second Grade

In 2000, Xiang, et al used additional student background information not available when High/Scope investigated kindergarten differences for its sample of 596 children to reconfirm those initial kindergarten findings and investigate potential group differences at second grade. This reanalysis of the data did in fact confirm the kindergarten findings. It also showed that second grade teachers rated MSRP graduates higher on being ready to learn, able to retain learning, maintaining good attendance, and having an interest in school. It is at second grade that the first findings related to grade retention and MSRP

attendance were discovered. Specifically, in second grade the MSRP group had a significantly lower rate of retention (8%) than the comparison group (15%).

Fourth Grade

Before the No Child Left Behind Act, the state of Michigan did not give its statewide standardized test to students until they reached the fourth grade. The state's test is called the Michigan Educational Assessment Program (MEAP). In 2002, High/Scope produced a report that followed those original 596 children into 4th grade and among other things looked at MEAP performance. Additionally grade retention among the MSRP group was lower than that of the comparison group. Figure 3 summarizes those findings.

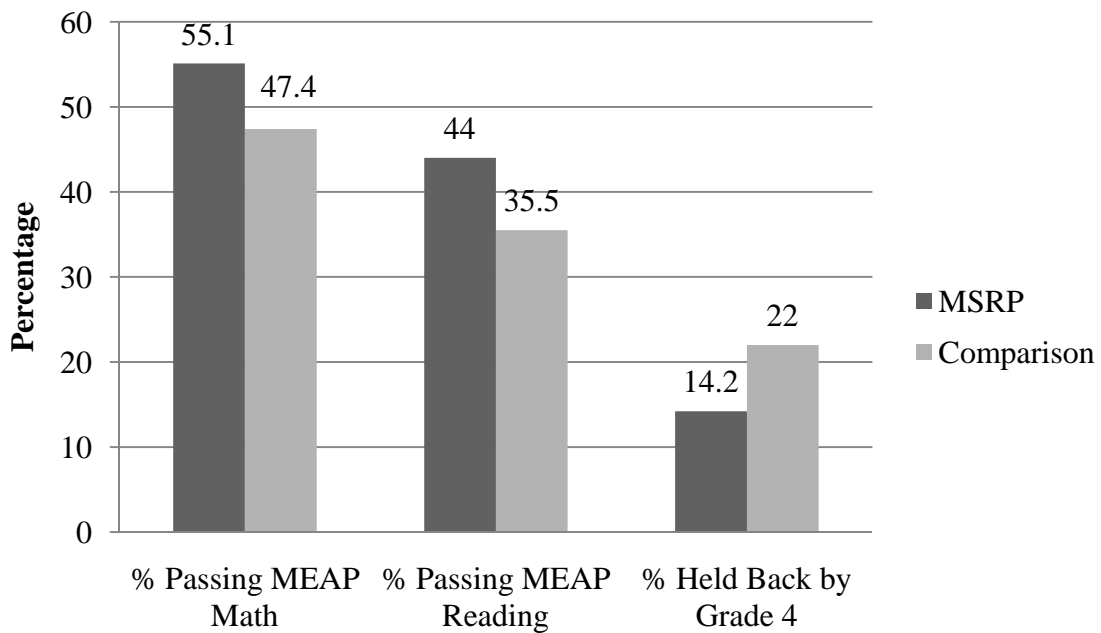


Figure 3. Fourth Grade MEAP and Grade Retention Findings

Middle School

In 2007, Malofeeva et al completed a longitudinal follow up that went back to that original cohort of 596 children and looked at their performance in middle school. In particular, five outcomes of interest were investigated: 7th grade MEAP scores, grade retention measured at the end of grades 6 – 8, school attendance measured at the end of grades 6 – 8, course enrollment for math and science courses (grades 7 and 8), and special education services received measured at the end of grades 6 – 8. Data was retrieved for 93% (556 children) of the original sample. The primary methodological approach used in that report was hierarchical liner modeling. There were no group differences found for 7th grade MEAP score, attendance, science course enrollment, or receipt of Title I and at-risk services¹.

With regards to grade retention, MSRP attendance was associated with a decreased likelihood of MSRP graduates being retained in Grades 6, 7 and 8. The odds of MSRP children being retained in Grade 6 were 36.1% less than the odds of retention for the comparison group. In both 7th and 8th grade an interaction between race and MSRP was found such that MSRP significantly reduced the likelihood of being retained for children of color while having no similar effect among white MSRP graduates (by 18.7% in 7th grade and 21% in 8th grade).

¹ While there were no group differences in 7th grade MEAP scores, there were differences in whether or not a student took the MEAP test on time or one year later. Among the MSRP group, 84.7% of children took the MEAP test on time as compared to 77.7% of the comparison group. Taking the test on time is related to the differential grade retention rates for the MSRP and comparison groups. Analyses of 7th grade MEAP data used all available test scores, some of which came from students who took the test on time and some of which came from students who had been held back a grade.

In addition to the interaction of program and race, it was found that in 8th grade, attending MSRP reduced the likelihood of being retained for boys as compared to comparison group boys but there was not similar effect among girls.

Findings related to math and science course enrollment were mixed. For example, in 7th grade boys who went to MSRP took more courses than comparison group boys while at the same time it appears that attending MSRP decreased the number of math courses taken by girls. Similarly, while non-white MSRP students took more math courses than non-whites in the comparison group, MSRP attendances seems to have decreased math course enrollment for white students.

Analyses revealed that MSRP attendees had higher rates of special education services in both 7th and 8th grade. While at first glance this appears to be counterintuitive finding, it cannot be forgotten that having a diagnosed handicapping condition is one of the 25 risk factor that make a child eligible for MSRP. When the sample was originally drawn, information on the prevalence of risk factors for the comparison group was not collected. Without that information, it is unclear whether or not increased receipt of special education services represents a success or failure of the MSRP to pursue its goal to serve that population.

On-Going Analysis (Preschool, Kindergarten, and 1st Grade)

In 2004 High/Scope began the Preschool Variation Study. The goal of this work was to draw a new sample of children from a mix of programs across the state. Data collection

ended for this study in the spring of 2007. It includes child, parent, teacher, classroom, program, principal, and school data for 407 children through their preschool, kindergarten, and first grade years. The original intent of the work was to be able to fully describe the policies, practices, and resources that are related to child outcomes across multiple settings – private child care, Head Start, and MSRP. The blended funding nature of program across the state has essentially made these program type distinctions nonexistent. The clearest contrast is between MSRP and private child care programs, since the most blending of funds is between MSRP and Head Start programs.

Nevertheless, preschool level data is already providing a rich description of aspects of program quality like curriculum use and literacy rich environments. For example, Early Language and Literacy Classroom Observation (ELLCO) data revealed that total literacy activities are significantly higher in MSRP than in either Head Start or private child care and MSRP is significantly higher than private child care in writing and Head Start in book reading. The range of curriculums used by MSRP compared to private child care is wide. MSRP program reported using High/Scope (27%), Creative Curriculum (9%), state developed curriculum (9%), Montessori (5%), ‘child-centered classroom’ (5%), and other (typically a home grown or eclectic approach) (40%). Private child care programs reported 62% using other, 25% using Creative Curriculum, and 13% High Reach.

Longitudinal analysis (that account for the nested nature of the data) of children’s literacy, math, and social skill development over time are ongoing.

Future Research Directions

There are at least three critical issues that must inform how policy makers judge the evidence on the effectiveness of their early childhood investments. First, the dependence on quasi-experimental designs have made it such that evaluations can produce evidence of a relationship between MSRP attendance and child outcomes but cannot claim to show a causal relationship. Recent evaluations of state-funded preschool programs have moved to a regression discontinuity design because it allows for causal statements. While it does increase the power of interpretations of findings, how it was used in the NIEER study is a demonstration of the second critical issue to consider. Specifically, evaluations of state-funded preschool programs must consider child outcomes in context. That is, the characteristics about the children and programs that might enhance or hinder the program effect. In Michigan, the NIEER multi-state study had no measure of preschool or kindergarten classroom quality.

The third critical issue is closely related to the importance of considering context. There is currently a debate among early childhood researchers as to the relative importance of different aspects of program quality. Program quality is classically understood as consisting of structural (e.g. teacher qualifications, adult-child ratios, hours of instruction) and process (adult-child interaction) factors. Recent studies have found that structural variables like years of teacher experience, and teacher degree are less related to child outcomes than the nature of the interactions between teachers and children (e.g. Early et al, 2007). At the same time others have countered that it is not that teacher qualifications

do not matter, it is just that we have not yet clearly defined what types of qualifications matter (e.g. Bogard, et al 2007). It is in response to this debate that one of the questions High/Scope will work with MDE to answer is - what are the aspects of quality that MSRP should emphasize.

Implications for Policy

The Michigan School Readiness Program has a 20 year history of providing high quality preschool experiences to four-year-old children at risk of school failure. Data over time have consistently found both short and long term positive outcomes for MSRP attendees. What is clear from the preceding description of the MSRP is that it has succeeded on these fronts despite expanding responsibilities that were not met with increased funding. For the MSRP to be able to continue to respond to changing community needs (e.g. increased numbers and diversity in non-English speaking homes), the state of Michigan must fund the program at a higher level. This means both at the per child level and funds available for program administration. The current MDE Consultant to grantee ratio is 1:183. There is no way to enforce quality accountability under these circumstances.

A very encouraging development in the state is the Early Childhood Investment Corporation (ECIC). The ECIC is a public-private venture designed to help local collaborative assess and respond to the early childhood care and education needs within their communities. ECIC collaborative bring together a mix of stakeholders – early childhood professionals, business leaders, politicians, parents, social service agencies. In

spite of many years of state budgetary declines and crisis, Gov. Granholm remains committed to the ECIC and early childhood issues. The MSRP is perfectly situated to inform and benefit from this initiative.

In addition to funding MSRP infrastructure, there remain evaluation questions that need to be asked and answered. The middle school findings present a mixed bag of outcomes, some of which imply that the MSRP produces more long-term benefits for non-white children. A recent evaluation of the state of South Carolina's state-funded preschool initiative found a similar trend for short-term impacts of that program (Browning et al, 2006). The question posed in Malofeeva et al is worth repeating here "What is it about these populations of children, the MSRP program, and the social and educational contexts they share that lead to better outcomes for some and poorer ones for others?" In order to answer this question, future evaluations of MSRP must employ more rigorous designs. For example regression discontinuity designs that also include program contextual variables, comparison group designs that utilize propensity score analysis, and if possible random assignment designs.

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