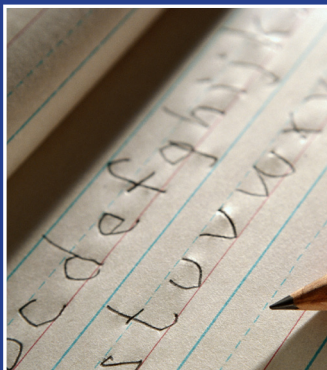


# SUMMARY OF KEY FINDINGS

## Long-term Effects of the North Carolina More at Four Pre-kindergarten Program



## Children's Reading and Math Skills at Third Grade

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The North Carolina More at Four Pre-kindergarten Program is a state-funded initiative for at-risk 4-year-olds, designed to help them be more successful when they enter elementary school. The purpose of More at Four is to provide a high quality, classroom-based educational program during the year prior to kindergarten entry. Over the years, 90% of the children served in More at Four have qualified for free or reduced-price lunch; eligibility for the program is also determined by other risk factors, such as low English proficiency, identified disability, chronic health condition, and/or developmental delay. More at Four has been providing a full school year pre-k program since 2002–2003, and has served over 160,000 children during the first nine program years (2002–2010).

### Study Design

Key findings on the long-term effects of participation in More at Four on children's third-grade End of Grade (EOG) math and reading scores are presented below. Statewide data from the NC Department of Public Instruction was used for all third-graders in the 2006–2007 and 2007–2008 school years. Of these, the More at Four sample included children who attended the pre-k program for at least 70% of the school year (in 2002–2003 and 2003–2004). The total sample consisted of 5,554 children who attended More at Four and 200,062 comparison children. The analyses also examined results by poverty status in third grade, comparing poor children (eligible for free or reduced-price lunch) and non-poor children (not eligible). In addition, the analyses adjusted for children's demographic characteristics of gender and race/ethnicity, as well as for state and local per pupil expenditures, which represented variations in the quality and resources provided by the school districts attended by different groups of children.

Two primary research questions were addressed by this study: 1) Are there any long-term benefits of participation in the More at Four Pre-k Program on children's math and reading skills in third grade?, and 2) Do the effects of More at Four participation on children's third-grade math and reading skills vary by children's poverty status?

## Major Results

- For all third-grade EOG outcomes—math and reading scale scores and achievement levels—poor children who attended More at Four performed better than their peers who did not attend More at Four. These results are of key importance, given that 90% of the children who attended More at Four were poor at that time.
- For non-poor children, those in the comparison group generally performed better than those who attended More at Four. However, the non-poor comparison group was likely more advantaged and included children who would not have been eligible for the More at Four Program during pre-k. In contrast, many of the MAF children were poor and had other risk factors at the time of pre-k.
- As expected, a consistent pattern was found where non-poor children performed better than poor children across all outcomes measured by the third-grade EOGs. However, these differences related to poverty were much stronger within the comparison group than within the MAF group.

## Summary and Conclusions

These findings suggest that for poor children (those who qualified for free or reduced-price lunch), participating in the More at Four Program during pre-k had longer-term benefits in terms of math and reading skills at the end of third grade. These findings were consistent across all EOG outcomes, indicating a broad positive effect of participation in the More at Four Program. These findings are of note, given that poor children represent the majority (90%) served by the More at Four Program.

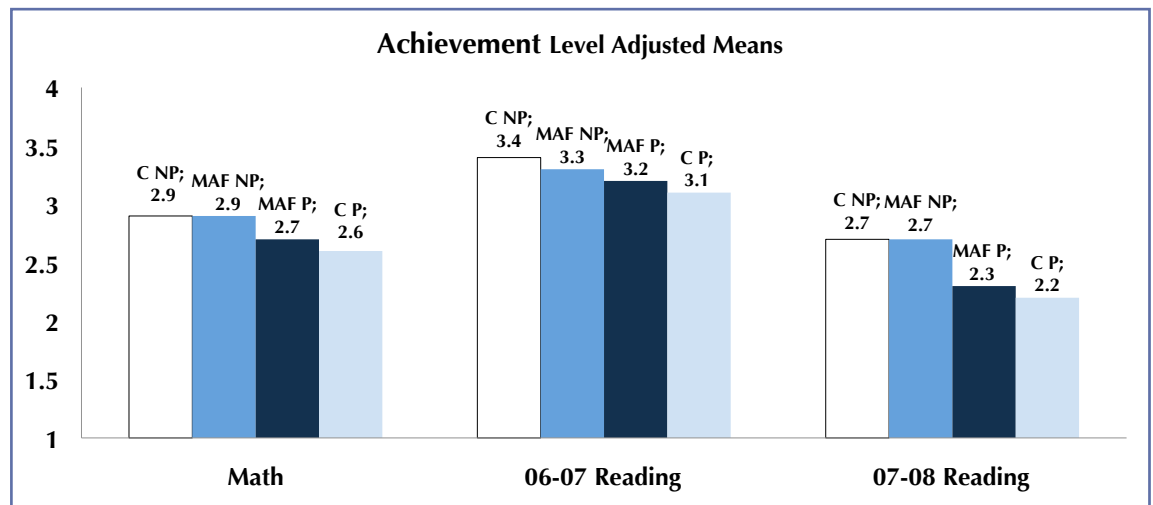
Not surprisingly, non-poor children performed better than poor children. This achievement gap in academic skills related to poverty is something that is widespread in our country. However, these effects were greater for the comparison group and substantially reduced for the MAF group. This may indicate that participation in More at Four has an ameliorating effect on the negative effects of poverty related to children's academic achievement.

In sum, these findings provide evidence that the More at Four Program is helping to lessen the achievement gap for poor children in both math and reading performance, and that such early pre-k experiences can have a lasting effect into the elementary school years.

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For more information,  
visit the evaluation website at  
[www.fpg.unc.edu/~mafeval](http://www.fpg.unc.edu/~mafeval)



C=Comparison; MAF=More at Four; NP=Not poor; P=Poor