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## Analysis of Indiana's Efforts to Improve Student Literacy, 1997-2002

By Jonathan Plucker

Over the past five years, the State of Indiana has stressed the importance of student literacy. Several initiatives to increase student literacy have been adopted by various organizations and government entities within Indiana. Although many of these initiatives are new, several programs, such as the state's Early Intervention Grants, have been in place and evaluated over several years. Given the diversity and

comprehensiveness of these many efforts, the time is ripe to provide an overview of Indiana literacy activities and review effectiveness data from relevant evaluations.

In this review, we (1) summarize data on student reading achievement in Indiana, (2) provide an overview of state initiatives, and (3) provide some conclusions about the effectiveness of these

initiatives. Detailed reviews of each initiative are provided at <http://www.indiana.edu/~iepc/literacy>.

Analyzing the nature of reading policy in Indiana is not a focus of this report. DeYoung et al. (2002) recently conducted this analysis, allowing this review to focus primarily on effectiveness of Indiana's wide-ranging reading initiatives.

## Reading Achievement in Indiana

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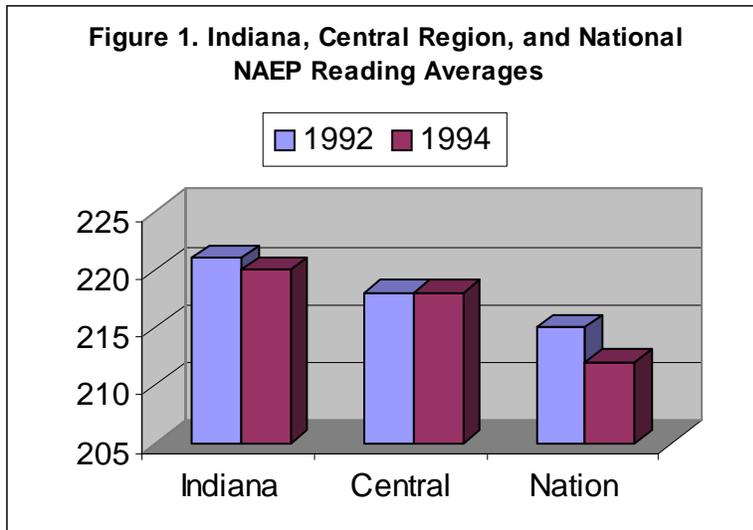
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Before the advent of state or national achievement testing, the most comprehensive assessment of Indiana students' reading was conducted by Farr et al. (1987). Examining test scores from 1944 to 1986, they found an increase in reading ability among 6<sup>th</sup> graders and a decline among 10<sup>th</sup> graders. Although 6<sup>th</sup> grade students in all types of communities performed well in 1986, 10<sup>th</sup> grade students in rural and urban areas performed particularly poorly.

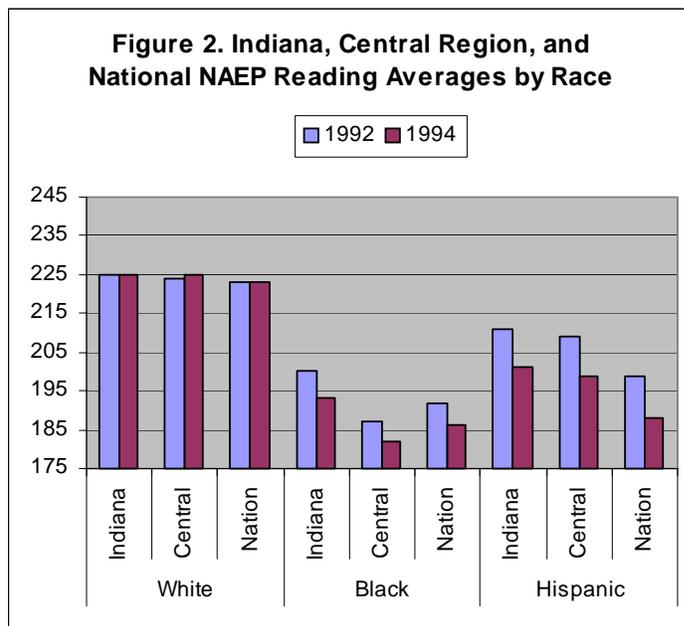
Since the publication of the Farr report, several state and national testing programs have been implemented, many of which include reading in their assessments. Relevant testing programs which are analyzed in this review include the National Assessment of Educational Progress (NAEP), the Indiana Statewide Test for Educational Progress (ISTEP), and the SAT.

Results of the NAEP state assessments in 1992 and 1994 suggest that Indiana students were reading well relative to

their peers both in the region and nationally (Figure 1). But as was the case with the Farr report, students exhibited a wide range of reading achievement, with Black and Hispanic students scoring lower than White students (Figure 2). Although data on locale are not included in this review due to space considerations, those data suggest students in disadvantaged urban and extreme rural settings scored lower than students in advantaged urban areas.



Notes: NAEP scores range from 0 to 500. The standard errors for the total scores are 1.3, 1.5, 1.0, 1.3, 2.7, and 1.1, respectively. Source: U.S. Department of Education. Central Region states include Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin, although not all states participated in both 1992 and 1994.



Notes: NAEP scores range from 0 to 500. The standard errors for Hispanic students are larger than those for Black students, which in turn are larger than those for White students. Source: U.S. Department of Education.

Indiana's ISTEP exams also provide interesting information about student literacy. Results from the last five years of ISTEP administration are presented in Figures 3 and 4. Figure 3 depicts trends in median NCE score performance by grade. These data suggest that reading skills are rising, although the data are incomplete due to the decision to stop mandatory administration of the norm-referenced portions of ISTEP.

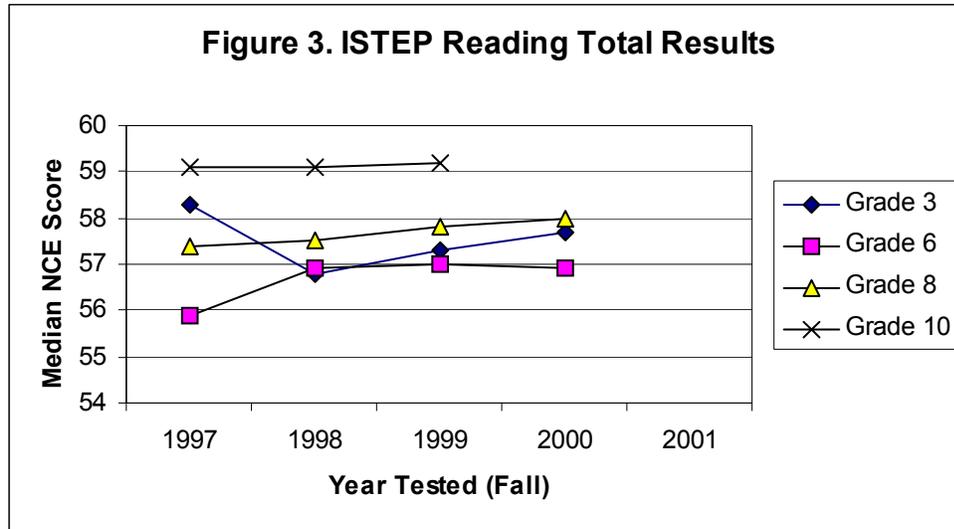
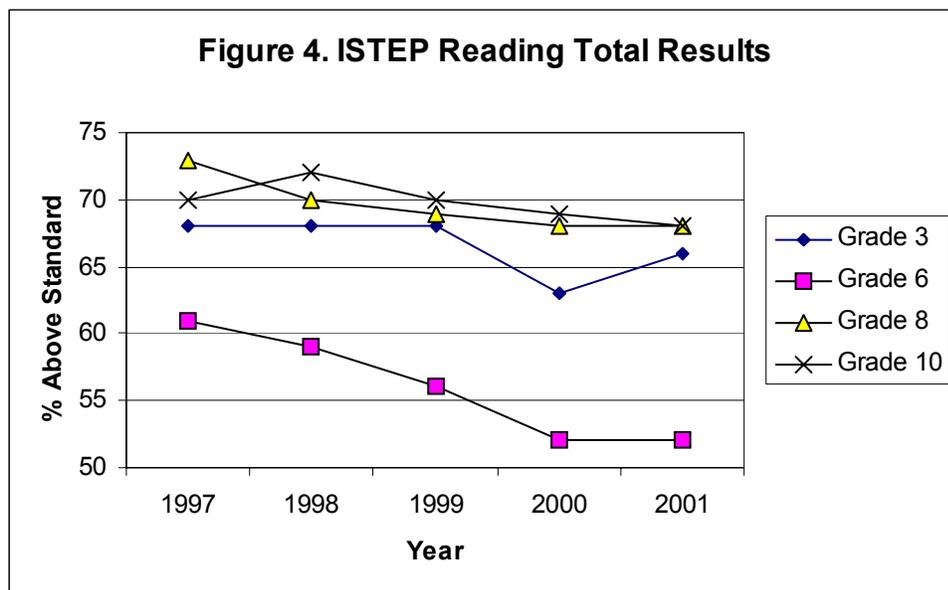


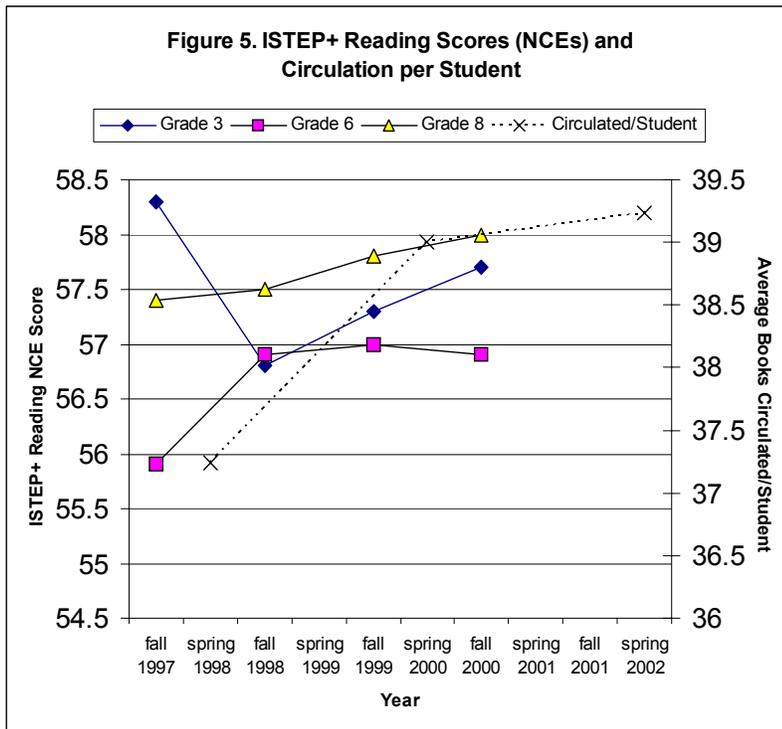
Figure 4 illustrates the average percents of students performing above the state standard by grade. These data provide evidence that the number of students who meet state literacy standards is declining. Interpretation of these data is problematic because (a) this portion of the test is not necessarily similar year-to-year and (b) Indiana's newer, more challenging standards have not been fully incorporated into ISTEP.



Notes: The revised state standards (see discussion later in this report) are not yet reflected in all levels of the ISTEP reading tests. Source: Indiana Department of Education

A third group of relevant test scores relates to SAT performance. Average SAT scores for Indiana students are presented in Figure 5. In general, Indiana students' verbal performance has risen consistently over the past decade, mirroring the national trend in SAT verbal performance. Over the past 15 years, the gap between Indiana and national average verbal scores has narrowed, and Indiana's verbal SAT score increase from 1992-2002 of 12 points is 4<sup>th</sup> among the 23 states and District of Columbia with participation rates of 50% or higher.

Figure 5. ISTEP+ Reading Scores (NCEs) and Circulation per Student



Notes: Although the state participation rate has varied, it ranged from 57-60% from 1995-2000, suggesting that the scores can be compared. Scores are adjusted to reflect changes in scoring formulas, allowing scores to be compared across the range of years depicted in this figure. Source: College Board.

### Contextual Issues

Two contextual issues made analysis of the data difficult. First, Indiana was one of only a few states not to participate in the 1998 NAEP reading assessments, leaving policymakers and analysts with only 1992 and 1994 state-level reading data. Indiana should participate in the collection of this extremely valuable information at every opportunity.

Second, changes in the ISTEP+ make it difficult to evaluate the effects of reading programs. The norm-referenced sections of the tests are no longer required for all schools in the state, resulting in a lack of norm-referenced scores for the state as a whole. Although school data are available from corporations that still administer the norm-referenced items, the lack of state summary data forces policymakers and analysts to rely primarily on data representing the percent of students who meet specific standards. However, as the standards change, comparing the criterion-referenced data can become the

equivalent of comparing apples and oranges. Also, of the 1,335 public and private schools reporting 3<sup>rd</sup> grade enrollment in 2001-2002, all but 139 appear to have required administration of the items composing the norm-referenced reading battery. Even when optional, nearly all schools still administer the section, begging the question of why this valuable section of the tests should not be

### Summary of Data Trends

Collectively, these data provide a promising trend of Indiana student literacy. Before the implementation of state literacy initiatives in the mid-1990s, Indiana students appeared to be performing slightly above the regional and national averages on most tests. Since the new literacy programs came into existence, most of the evidence suggests that literacy is rising, both in isolation and relative to students in other states. However, the data also suggest that Indiana's successes with literacy may not apply equally to all groups of students, with rural, urban, and minority students performing at lower levels than suburban and white students.

## Overview of Statewide Literacy Initiatives

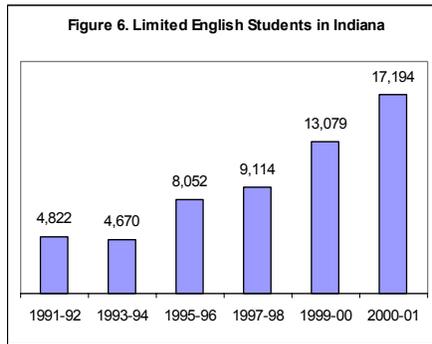
State Superintendent Suellen Reed announced the Reading and Literacy Initiative for a Better Indiana in December 1996. When the Initiative was announced, Dr. Reed noted that, "Too many Hoosiers, students AND adults, have not mastered the basic skill of reading. We know this to be true when we review student assessment scores and examine the needs of the adults in our adult education programs." The proposed initiative had three components:

1. Early intervention programs such as Reading Recovery for early grade levels
2. A renewed investment in school library books
3. Adequate funding for the state's adult education/literacy programs

The bill (House Bill 1112) was approved by the legislature with funding for the biennium of \$8 million for early intervention programs, \$4 million for school library materials, and a \$2 million increase in adult literacy funding.

The Reading and Literacy Initiative for a Better Indiana 1999 proposed another \$8 million in funding for early literacy programs, an increase to \$8 million for library materials, and an increase of \$750,000 per year for adult literacy programs. The approved state budget (House Enrolled Act 1001) included \$8 million for early literacy, \$6 million for library materials, and a \$500,000 annual increase for adult literacy programs.

The Reading and Literacy Initiative for a Better Indiana 2001 introduced a fourth component to the Superintendent's legislative agenda regarding literacy. This component addressed the increase in Indiana students classified as limited English proficient. Over the previous decade, the number of limited English proficient (LEP) students had increased over 300%, with the number of native languages other than English increasing to 212 (Figure 6).



Source: Indiana Department of Education.

Overall, the 2001 proposal requested an increase for early literacy programs of \$2 million per year, an increase in library materials funding to \$10 million for the biennium, an annual increase of \$1.2 million for adult literacy programs, and expansion of the \$1.4 million Non-English Speaking Grant to a \$24 million program that would serve LEP students. The approved state budget (House Enrolled Act 1001) allowed for the same funding levels as were included in the previous budget (1999-2001), with \$8 million for early literacy, \$6 million for library materials, \$28 million for adult education, and \$1.4 million for ESL programs.

However, the state's budget difficulties adversely impacted these funding levels. For 2002-2003, the school library materials funding was eliminated (\$3 million), and the early intervention and non-English speaking program budgets were each reduced by

## Conclusions

The data presented in this review provide evidence in support of several conclusions. The breadth and depth of existing and upcoming programs is impressive, with varying levels of research support among the programs. Those programs that have been evaluated are generally associated with positive outcomes, especially those funded by the Early Intervention program and School Library Print Materials program. Other major efforts, including the revised state

standards in English/language arts, have been positively reviewed by third parties with expertise in standards evaluation. Collectively, Indiana's literacy efforts appear to have a positive effect on Indiana students, and they compare favorably with efforts in other states.

## Recommendations

Each of the state's K-12 literacy programs should continue to be held accountable for documenting results, and the state should continue to partner with organizations to exercise oversight of these programs. In some cases, such as the School Library Print Materials program, oversight should be increased to ensure that all schools receiving program funds benefit as positively as exemplary schools.

New initiatives, such as I-READ and Reading First, and recently introduced programs (e.g., Waterford Early Reading Program) should be subject to the same rigorous evaluations as more established programs (Early Intervention grants, Reading Recovery). In addition, policymakers should determine whether specific components of Indiana's Early Intervention grants are necessary given the new, federally-funded I-READ and Reading First programs.

Although the number of K-12 limited English students increased substantially over the past 10 years, annual funding for limited English programming remained steady for most of the decade and recently decreased. Failure to provide increased state support for the rapidly growing population of LEP students could force school corporations to face the difficult choice of not serving the needs of these students or taking the necessary funds from existing programs.

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## Profiles of Statewide Literacy Initiatives

The IEPC Web site ([www.indiana.edu/~iepc/literacy](http://www.indiana.edu/~iepc/literacy)) contains detailed profiles of Indiana's major literacy initiatives. Information for each program includes years of existence, related legislation, schools served and dollars spent per funding cycle, description of the program, analysis of research on effectiveness, information on the future of the program, and sources for additional information.

Profiles include:

- Programs and activities not directly related to the Superintendent's Literacy Initiative: Academic Standards 2000 for English/Language Arts, Indiana Reading Licenses and Specializations, and Grade 1 and Grade 2 Reading Assessments
- Programs directly related to the Superintendent's Literacy Initiative: Early Literacy Intervention Grant Program, Indiana's Reading Excellence Act Demonstration Program (I-READ), Reading First, School Library Media Grants, and Programs Administered by the Language Minority and Migrant Programs (LMMP) Office
- Programs frequently implemented in Indiana: Literacy Collaborative, Reading Recovery, Four Blocks Literacy Model, and Waterford Early Reading Program

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