

KENTUCKY DEPARTMENT OF EDUCATION

STAFF NOTE

Review Item:

AdvanceKentucky – Kentucky’s Participation in the National Math and Science Initiative

Applicable Statute or Regulation:

KRS 158.622

History/Background:

Existing Policy. In Summer 2007, the National Math and Science Initiative (NMSI) selected Kentucky as one of seven states to create nonprofit enterprises for expanding participation and success in Advanced Placement ® courses in math, science and English. NMSI is a new national non-profit funded by ExxonMobil, Dell and the Gates Foundation. The Kentucky Science and Technology Corporation (KSTC) agreed to assume responsibility for creating and operating the nonprofit entity to lead Kentucky’s grant, which is called AdvanceKentucky. Dr. Joanne Lang, KSTC, heads AdvanceKentucky. The Kentucky Department of Education is a partner, along with the Council on Postsecondary Education and the Partnership for Successful Schools.

Twenty-eight states submitted pre-proposals to NMSI; twenty-one were invited to submit full proposals; fifteen received site visits; and, seven were selected. Other NMSI states are Alabama, Arkansas, Connecticut, Massachusetts, Virginia and Washington. AdvanceKentucky will receive about \$13.6M over a six-year period. Those funds will support strategies such as high expectations for student performance, more time-on-task for students, recruitment and support of underserved populations of students, extensive teacher training, lead teacher/mentor support, teacher stipends, and other student and teacher incentives for success.

Kentucky’s proposal initially targeted 41 schools representing more than 18,000 high school juniors and seniors in 26 geographically dispersed counties. Of those 41 schools eligible to participate, twenty-eight submitted Requests for Proposals to KSTC. At the April Kentucky Board of Education (KBE) meeting, KSTC will announce the schools that have been chosen as AdvanceKentucky NMSI sites in year one. In future years, additional schools will be added to the AdvanceKentucky initiative.

Kentucky is the only state in which the National Math and Science Initiative has awarded grants at both the K-12 and postsecondary levels. A NMSI UTeach Program grant for teacher preparation was recently awarded to Western Kentucky University.

The following graphs depict the success of the NMSI model in Texas. Kentucky is particularly interested in the aspects of this approach that impact participation and performance among traditionally under-represented populations. Among the ten NMSI-supported schools in the

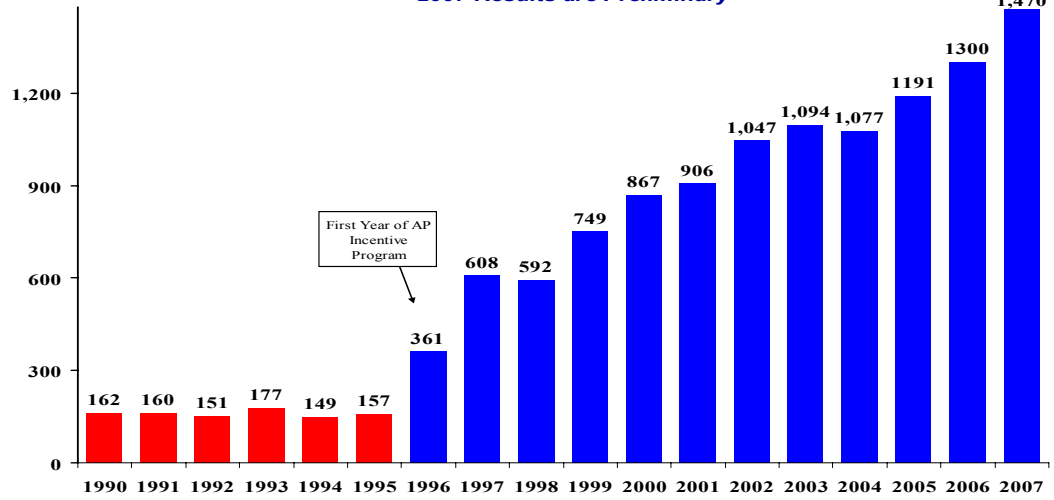
Dallas Independent School District (Dallas ISD), scores qualifying the student for college credit increased from 361 to 1470 across twelve exam administrations:



AP Qualifying Scores

in 10 Dallas ISD AP Incentive Schools

in Math, Science, and English
2007 Results are Preliminary



Source: The College Board

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Qualifying scores among African American and Hispanic students increased over 400%:



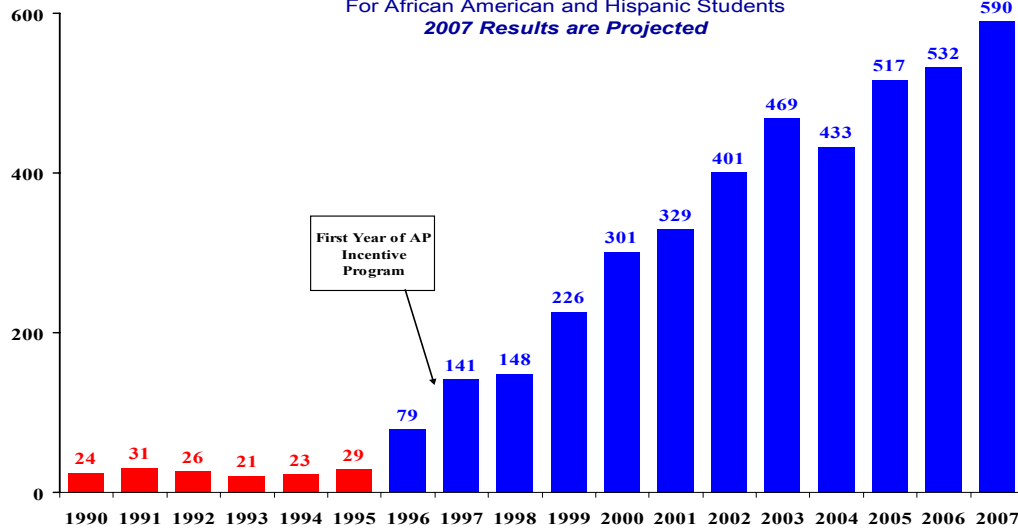
AP Qualifying Scores

in 10 Dallas ISD AP Incentive Schools

in Math, Science, and English

For African American and Hispanic Students

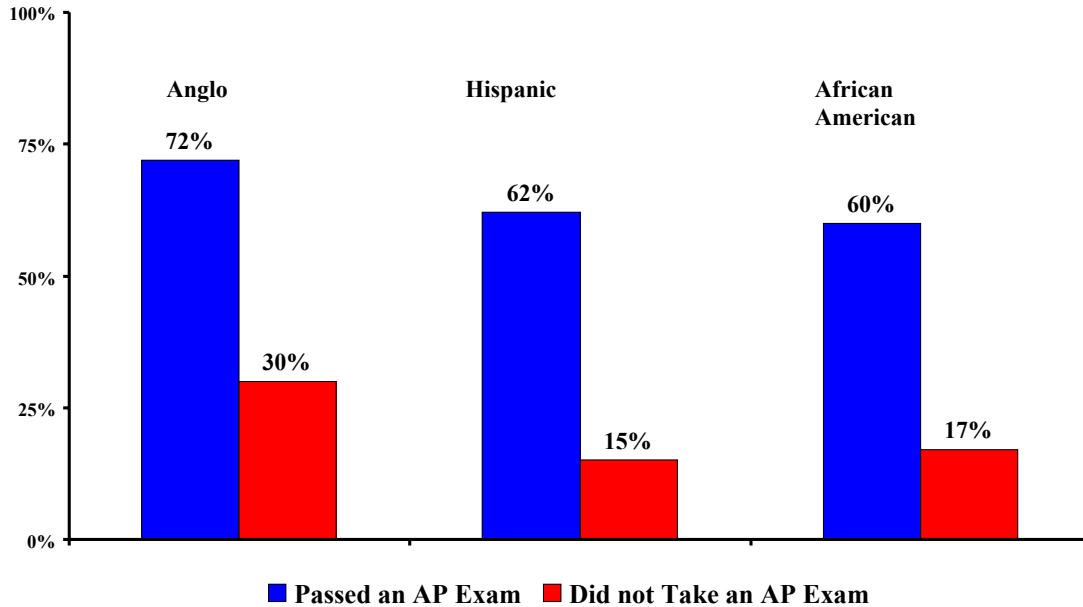
2007 Results are Projected



Source: The College Board

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The six-year graduation rate among students who earned a qualifying core of 3 or higher on an AP exam compared to those who did not take an AP exam, according to Texas Public Colleges and Universities, was significantly higher.



The goals of AdvanceKentucky are:

1. **QUALIFIED AP TEACHERS AND LEAD MENTORS:** Significantly increase the Advanced Placement® teacher capacity in terms of qualifications and numbers as evidenced by qualified AP Teachers and Lead Teachers, AP Readers, and AP Consultants in Kentucky. Provide advanced level, content-focused training for AP teachers. Cultivate networks and lead teachers in each content area.
2. **DIVERSITY OF STUDENTS AND TEACHERS:** Significantly increase the number and diversity of students enrolled in and teachers teaching the NMSI-designated AP courses in Kentucky, above the baseline levels reported in the profiles of the AdvanceKentucky target schools. Create and maintain AP course offerings to accommodate student demands, including the use of the Kentucky Virtual High School.
3. **AP QUALIFYING SCORES:** Significantly increase the number of successful AP test-takers scoring 3 or above in each of the NMSI-designated AP courses in math, science and English, with the ultimate aim of no less than one-third of a high school's students taking AP courses. Move each school aggressively through its Customized AP Plan (CAPP) to prepare students for achieving mastery level on AP exams in mathematics, science and English.
4. **RESOURCE NETWORKS:** Take advantage of existing resources and networks to most efficiently achieve expected gains, while building capacity. Engage the Kentucky Virtual High School wherever feasible to meet the needs of the target schools in achieving their customized AP plans. Add strategic voice and value to championing rigorous high school

course content that is vital to Kentucky's economic competitiveness in an increasingly global environment.

5. **SUSTAINABILITY:** Institutionalize the enterprise in a way that attracts both start-up support as new schools come on board and long-term fiscal support to sustain the gains for years to come, based on a locally customized approach for accelerating AP successes in each school. Establish and maintain an infrastructure for the statewide AdvanceKentucky enterprise that is programmatically sound and fiscally feasible yet entrepreneurial in its business approach to allow for aggressive, breakthrough progress at all target schools. (KSTC is an established entrepreneurial, non-profit company with 20 years' successful experience in new enterprise development.)
6. **LONGITUDINAL DATA:** Build Kentucky's longitudinal reporting capacity to become an elegant tool to support not only accountability for AdvanceKentucky but also a strong, trusted asset in the development of long-term public policies that expect and incent advanced achievement for all students.

Impact on Getting to Proficiency:

All students have the right to a rigorous curriculum, high quality teaching and the supports that will enable them to be successful as they pursue higher levels of learning and educational opportunity.

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Commissioner of Education

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