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West Tallahatchie High School

Contextual Overview

West Tallahatchie High School is located in the town of Webb in the Delta region of North Mississippi. The region's poverty had been widely publicized and studied in many documentaries. West Tallahatchie School District is in one of Mississippi's poorest counties.

Almost all students attending the school district (96%) receive free or reduced price lunch. No viable industry exists in the county and the primary source of income is generated from farming. Still the unemployment rate for the county dropped to 7.8% in 1999 from 10.6% in 1998. (Source: Reginald Barnes, Superintendent, West Tallahatchie County School District)

The racial/ethnic composition of the West Tallahatchie community is 71.4% African American and 27.84% White and .76% other racial/ethnic groups combined. Conversely, the state of Mississippi's racial/ethnic composition is 63.09% White and 35.51% African American with a comparable number of other racial/ethnic groups of 1.4% combined. See Table 1 below.

Table 1. West Tallahatchie School District's and Mississippi's Demographics

	W. Tallahatchie School District	Mississippi (state)
Total Persons	6,440	2,573,216
Percent (%) Urban	0.00	47.07
Racial/Ethnic Percent (%)		
White	27.84	63.09
African American	71.40	35.51
Other Racial/ethnic (Combined)	.76	1.4
<i>Source: School District Data Book Portfolio)</i>		

The number of students enrolled in school in West Tallahatchie School District is 1,695 compared with a statewide enrollment of 555,686. Slightly more than 13% of the District's students are enrolled in private schools compared with only 10.6% for the state. Of the total number of students enrolled in school in the West Tallahatchie School District, 1,467 attend public schools and 228 (13.45%) attend private schools. Moreover, there is a disproportionate number of White students enrolled in public schools (4.95%) compared with

the total number of African American students (81.36%), and compared to the total number of White students enrolled in public schools statewide. (240,224/43.23% of total student enrollment of 555,686 and 240,224/48.39% of the total number of students enrolled in public schools [496,402] statewide) See Table 2 below.

Table 2. Student enrollment in public and private schools in West Tallahatchie and the state of Mississippi

	W. Tallahatchie School District	Mississippi (state)
Total Student Enrollment	1,695	555,686
White	302	292,268
Black	1,381	254,085
Other (Combined)	12	3,255
Public School Enrollment	1,467	496,402
White	84	240,224
Black	1,379	248,466
Other (Combined)	4	86
Private School Enrollment	228	66,996
White	218	52,044
Black	2	5,619
Other (combined)	8	9,333

Source: School District Data Book Portfolio

The problem of low investment in student expenditure may contribute to the limited resources available to make needed improvements and may be compounded by the large percentage of white students (72.9%) who attend private schools.

West Tallahatchie High School AP Story

West Tallahatchie High School is located in Webb, Mississippi in the Delta Region on North Mississippi. Historically known for its vast land mass and widespread poverty, the Mississippi Delta has produced some of the most remarkable talent in the nation. It is a region of stark contradictions; struggling farmers and wealthy aristocracy, impoverished education systems and tremendous talent, disenfranchised masses and relentless activists working to find a voice to speak out against the entrenched centuries old inequities. The most dramatic contradiction is the production of bright, enthusiastic and hopeful young people who achieve extraordinary things against the backdrop of what others define as an impoverished and rural Delta.

The Algebra project was introduced to West Tallahatchie School District in 1993. During the fall of the same year, two sixth grade teachers, Bessie Campbell and Harvey Smith, implemented the Algebra Project curriculum and pedagogy. They used the first year to refine their AP instructional methods utilizing the training they received earlier. As Mrs. Campbell and Mr. Harvey gained more confidence in their AP learned skills, they noticed changes in the way students viewed mathematics and how much easier they seemed to grasp mathematical concepts and solve problems.

During the second year of AP implementation, the district welcomed a new superintendent, Mr. Reginald Barnes. Encouraged by the discovery of a new and powerful vehicle to improve student performance, Mr. Barnes gave the two sixth grade teachers permission to continue providing AP instruction to the seventh graders who had received AP instruction as sixth graders. This same group of students also attended a series of AP workshops for six weeks conducted by Bob Moses, the Algebra Project Founder. (Source: *West Tallahatchie School District...A Study of a North (MS) Delta Algebra Project Site*, Delores Bolden-Stamps, Ph. D., 1998)

Professional Development and Practices

West Tallahatchie High School has three AP trained teachers. One has completed the sixty hours Transitional Curriculum and one teacher has completed 151 hours of additional AP training through SIAP professional development workshops.

The initial emphasis of the SIAP in West Tallahatchie School district was to provide AP instruction to fifth and sixth graders. Currently there is greater emphasis on increasing teacher training and the number of AP trained teachers at the high school level.

AP teachers provide instruction that develop and promote problem solving skills. The instruction encourages individual and group activities in which students learn to share information and responsibility. AP teachers incorporate everyday activities and life experiences into instruction to help students better understand and master algebraic and mathematical concepts.

Community Development and Community-School Integration

To date, community development and community-school integration efforts have been limited. Parental involvement in their students' education is limited and exists only on an individual basis. There are no active parent-teacher or community-school initiatives which address the quality of education.

The SIAP is currently working with key people in the West Tallahatchie community to initiate grassroots interest in community development issues that impact the systemic problems of this non-affluent school districts.

Algebra Project Features/Programs

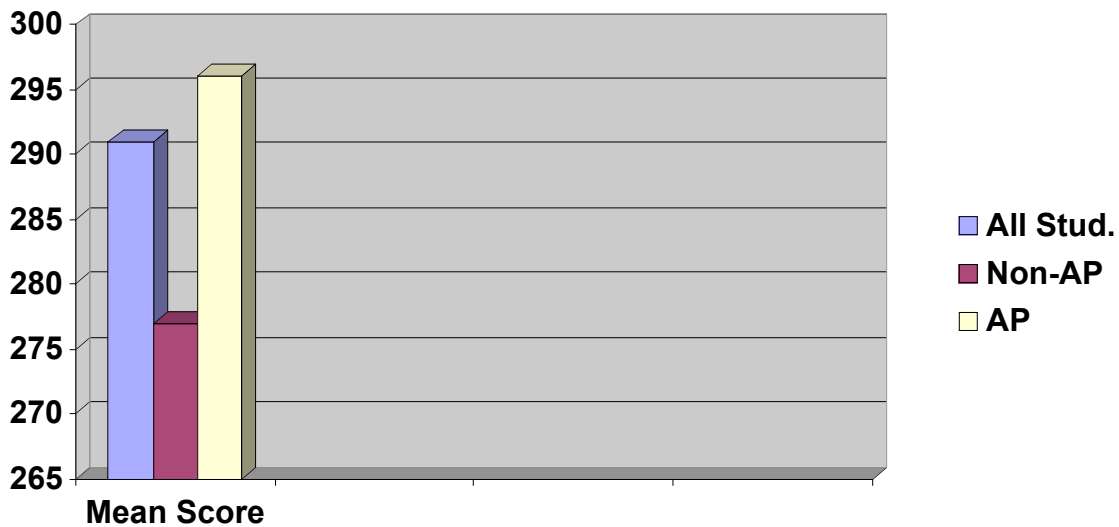
Student Performance and Outcomes

Since implementation of the Algebra Project, students in the West Tallahatchie School District have improved performance on standardized and teacher administered tests. Specifically, students enroll in algebra and other higher level and college preparatory mathematics and science. Many students and teachers attribute this increase to the influence of the Algebra Project curriculum and pedagogy.

When reviewing student outcomes on standardized tests, primary focus was placed on West Tallahatchie High School students who enrolled in Algebra I for the school terms 1996-97 and 1997-98. The test used to assess students performance in Algebra I is part of the Mississippi Statewide Testing Program. Test scores were compared for students who received AP instruction with students who did not.

For the 1997-98 school term, 99 students took the Algebra I Test. Overall test results indicate that AP instructed students scored higher than non-AP instructed students. Their test scores were also higher than the AP and Non-AP scores combined. See Chart 1 below.

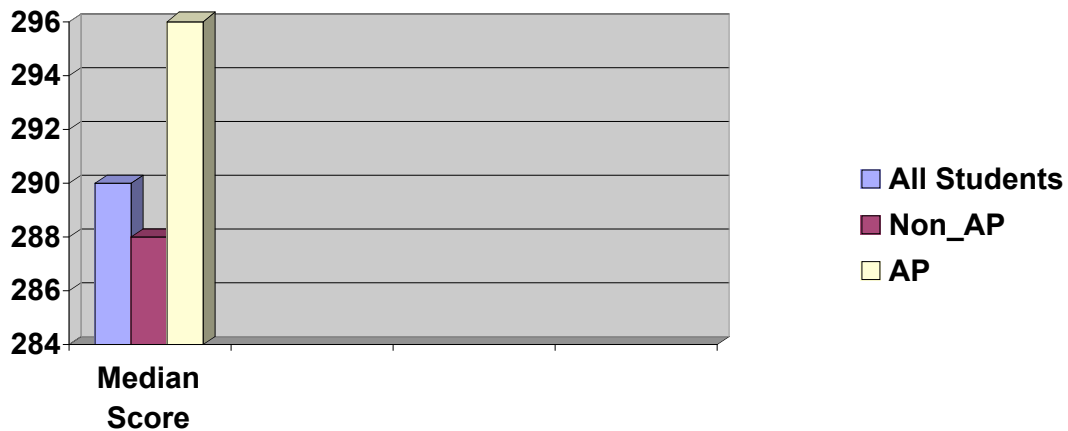
Chart 1. AP instructed students scored higher than Non-AP and all students (AP and Non-AP combined) on the State Algebra I Test.



AP instructed students scored better in all three areas of score distribution, mean, median and mode than Non-AP instructed and AP and Non-AP students combined.

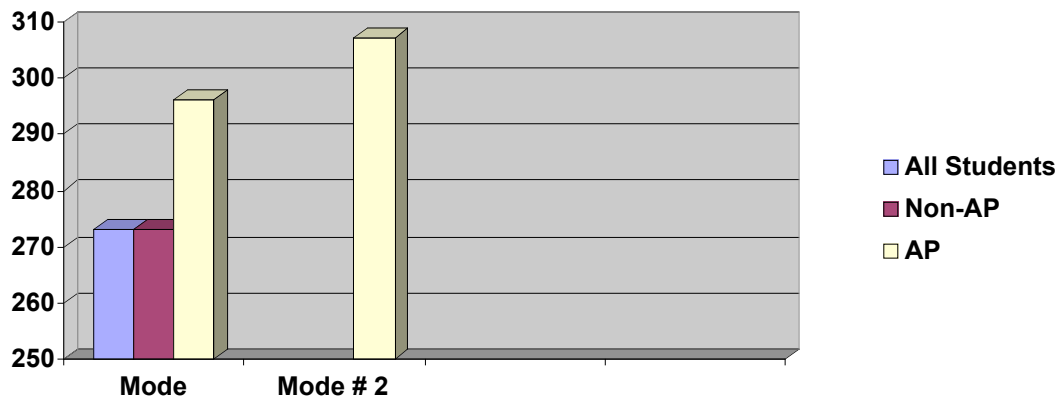
The median score for the AP instructed group was 8 points higher than the Non-AP instructed and 6 points higher than the combined AP and Non-AP instructed group. See Chart 2 below.

Chart 2. Mississippi Statewide Testing Program, 1997-98 Algebra I Median Score for all Algebra I, AP and Non-AP instructed students



The mode distribution showed a greater variance between the three groups than either the mean or the median scores. See Chart 3 below.

Chart 3. Mississippi Statewide Testing Program, 1997-98 Algebra I Mode for all Algebra I, AP and Non-AP instructed students



Of the 46 AP students taking the Algebra 1 Test, six (6) scored 296, six (6) scored 307, one (1) student scored a high of 331 and one (1) scored a low of 260.

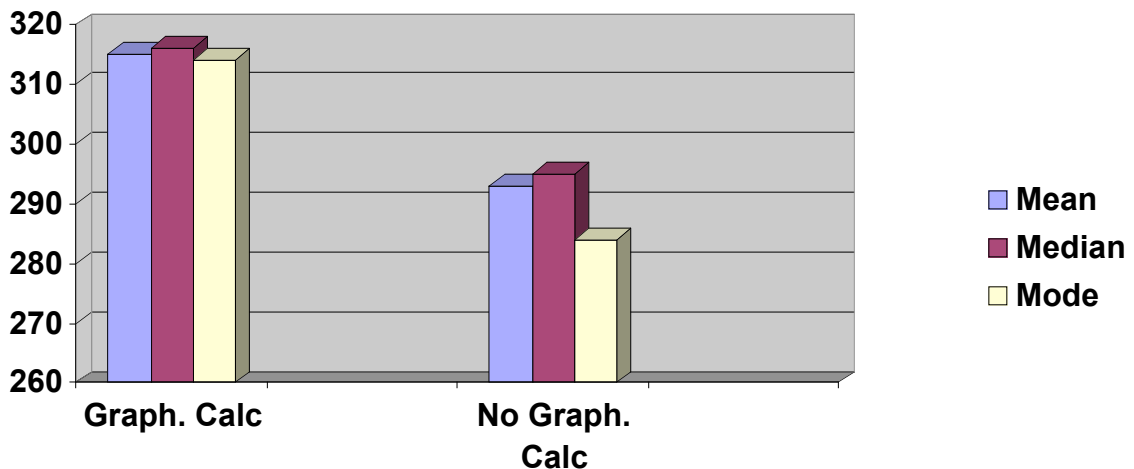
A total of 53 Non-AP students took the Algebra 1 Test. Non-AP students' test scores ranged from a high of 338 to a low of 246. Seven (7) students scored 273, one (1) scored 338 and one (1) scored 246.

AP students frequently engage in other activities which enhance their learning. They participate in attend youth leadership conferences, math literacy initiatives, and workshops. Students who participate in these activities typically credit their experiences with increased confidence and higher performance in mathematics.

When evaluating the influence of AP related experiences on student outcomes, 1996-97 Algebra 1 Test scores were compared for 36 AP students. Sixteen (16) students attended the graphing calculator workshop and 20 AP students did not attend. A comparison of the two groups' performance on the Algebra 1 Test revealed the 16 AP students who attended the graphing calculator workshop had higher test scores than the 20 AP students who did not attend.

The 16 AP students who attended the graphing calculator workshop had test scores ranging from a high of 343 to a low of 282. The median score for this group was 316, the mean was 315, and the mode was 314 (scored by 3 students). See Chart 1 below

Chart 5. 1996-97 Algebra 1 Test scores of AP students who attended the graphing calculator workshop compared with AP students who did not attend

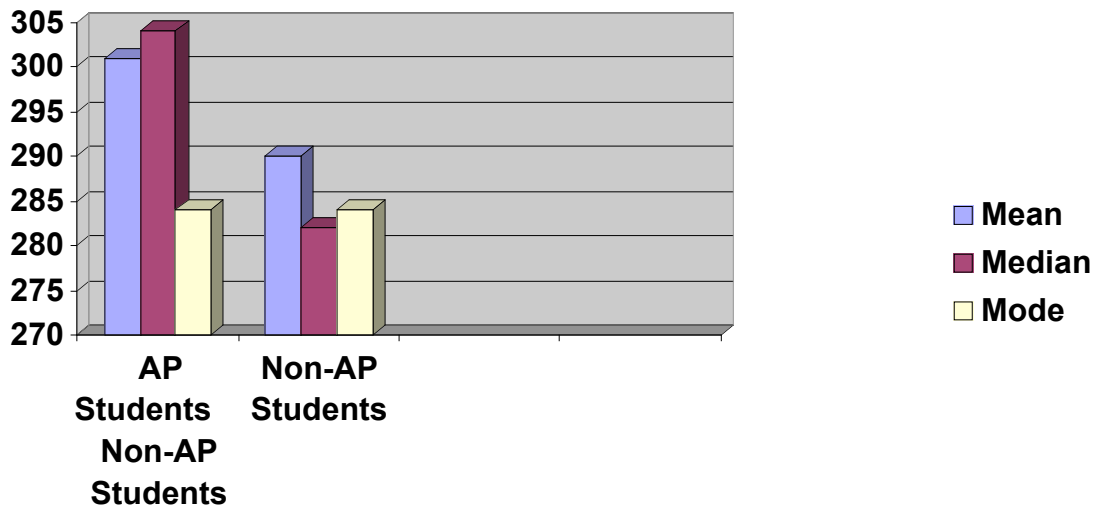


By comparison, the 20 AP students who did not attend the graphing calculator workshop scores ranged from a high of 318 to a low of 284. For the group that did not attend the graphing calculator workshop, the median score was 295, the mean score was 293 and the mode was 384 (scored by 5 students). See Chart 5.

When all AP students' test scores were compared with Non-AP students' scores on the Algebra 1 Test, AP out performed the Non-AP students a wide margin. The 69 Non-AP students had scores ranging from a high of 316 to a low of 251 compared to the 36 AP students whose scores ranged from a high of 343 to a low of 282.

The 36 AP students had a mean score of 301, a median score of 304, and a mode of 284 (scored by 5 students). The Non-AP students had a mean score of 290, a median score of 282, and a mode of 284 (scored by 7 students). See Chart 6 below.

Chart 6. 1996-97 Algebra 1 Test scores of AP and Non-AP students



Students benefit from the Algebra Project in ways that exceed performance on standardized tests. High school students who received AP instruction earlier in their school years cite benefits that continue to impact their attitudes about and performance in mathematics. See Highlight Box 1.

Highlight Box 1. West Tallahatchie High School students discussed benefits of the Algebra Project

Benefits Received from the Algebra project

- ◆ Mathematical problem solving skills
- ◆ The Algebra project made math fun
- ◆ Math seemed easier
- ◆ Learned to use the graphing calculator which was later helpful in geometry and sometimes in Algebra
- ◆ Learned problem solving skills that were useful in working algebraic equations
- ◆ Helped students develop confidence
- ◆ Learned the benefits of working in groups to solve problems
- ◆ The Algebra Project provided an edge when enrolled in higher level mathematics courses
- ◆ Use of “word problems as opposed to just numbers all the time” helped in algebra
- ◆ Algebra helped in chemistry with equations
- ◆ Students continue to use the group process and consensus as a result of AP exposure and have learned the value of getting more than one view
- ◆ The Algebra project helped students develop confidence

The Algebra project's Future

The Southern initiative of the Algebra Project is currently exploring avenues for increasing the AP's influence in the West Tallahatchie community. Inherent in projected initiatives are community development, increasing the number of AP trained teachers, providing ongoing training for existing AP teachers and monitoring the qualitative and quantitative AP influence on student achievement and outcomes.