



High schoolers in the computer-science class complete hands-on activities such as coding their own programs.
photo by Sutang Zhang

UA students prepare high schoolers for college-level math, science, English and computer-science courses, helping Alabama lead the nation for growth in qualifying scores on Advanced Placement exams.

BY OLIVIA GRIDER

Makenzie Taylor expected typical classroom activities – taking notes from PowerPoint presentations and completing worksheets – when she signed up for a summer program aimed at preparing her for the Advanced Placement computer-science course at her high school.

What she got through the CollegeFirst program at The University of Alabama was drastically different. “The experience was much more hands-on and engaging,” says the 11th grader at Hillcrest High School in Tuscaloosa. “One major concept we learned was the way a computer processes information. Individually, we had to stand at the front of the computer lab and describe a shape so that everyone else could correctly draw it. The activity gave us an idea of how thorough programmers have to be when giving instructions to the computer.”

Taylor and her classmates also coded their own programs and disassembled and reassembled laptop computers.

In the summer of 2016, 127 high school students were part of CollegeFirst, a nationally unique UA service-learning initiative designed to prepare high schoolers – particularly those from underserved schools – for college-level Advanced Placement courses in biology, calculus, chemistry, computer science and English. Thirty-three University of Alabama students in Tuscaloosa and Birmingham led the high schoolers through three weeks of demanding pre-AP curriculum.

Advanced Placement courses give high school students the opportunity to take college-level courses taught by teachers in their schools. Students who pass AP exams earn college credit.

UA students, who enroll in UH 300/NEW 310 CollegeFirst during Summer Term I, spend an initial week studying educational disparity and creative education-reform efforts and learning to be tutors. During the following three weeks, they work with the high school stu-

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dents, mentoring them and assisting them academically.

Taylor, who hopes to land a job in artificial intelligence, says camaraderie between the high school students and mentors was her favorite aspect of the program. “The college students who taught me were able to make the lesson plans easier to understand,” she says. “Because the mentors were closer to my age, it was also easier to relate to them [compared to a typical teacher]. Not only were they dedicated to advancing my understanding of the material, they also aided me in preparing for a career in computer science.”

CollegeFirst mentors find the high schoolers inspiring as well. “Getting the chance to be a mentor has truly been an eye-opening experience,” says Chelsea Aaron, a sophomore from Oak Grove, Ala., majoring in telecommunication and film and geography. “Seeing the students’ progress and enthusiasm throughout the three weeks was absolutely amazing and proves that children want to learn and can be successful if given the opportunity.”

In 2008, Alabama ranked 43rd nationally in AP exams taken and 45th in exams passed, according to the College Board. The UA Center for Ethics & Social Responsibility created CollegeFirst in 2010 in partnership with A+ College Ready, a statewide initiative that pro-

vides extra test preparation sessions and assistance with AP-exam costs. Shortly after it began in 2008, A+ College Ready almost doubled the number of AP courses offered in participating schools and more than doubled the number of students enrolled.

Many of these students, however, were not prepared for AP coursework. CollegeFirst’s pre-AP summer curriculum addresses this issue and ensures students are ready for college-level study the first day of the school year.

Due in large part to A+ College Ready, Alabama has led the nation for growth in qualifying scores on Advanced Placement math, science and English exams during the past eight years. After just one year in the A+ College Ready program, 132 Alabama high schools showed an average 105-percent increase in AP qualifying scores – 17 times the national average. A+ College Ready has now expanded into almost half of all Alabama public school systems. The number of AP course takers in Alabama has risen from 5,327 students in 2008 to 27,817 students in 2016.

Students who pass AP exams are three times more likely to earn a college degree than those who do not pass, according to the College Board.

All high school students deserve an opportunity to succeed in rigorous, college-level experiences, says Stephen Black, director of the UA Center for Ethics & Social Responsibility. “This initiative recruits successful college students to serve as both tutors and mentors, helping increase the number of high school students who will be ready not only to attend college, but to excel in college,” he says.

Jacob McHugh, a senior from Charlotte, N.C., majoring in political science, says working with CollegeFirst was an invaluable experience. “It exposed me to not only the flaws of the U.S. educational system, but also to some potential solutions,” he says. “Programs such as CollegeFirst have the potential to make large differences in the lives of students. In the short time I spent as a mentor, I saw students’ writing vastly improve, their curiosity expand and their ambitions soar.”

McHugh says a high school student told him she had never considered a college major before, but decided during the CollegeFirst program she wants to major in political science. “In moments like these, it becomes perfectly apparent how much of a difference teachers make in the lives of their students,” he says.

McHugh plans to earn a law degree and take a position with the federal government, working to shift public policy to benefit underserved communities. “CollegeFirst helped me realize that I have a passion for public-policy solutions, especially in regard to education,” McHugh says.

Many UA students say course reading assignments and discussions and their interactions with the high schoolers



A high school student in an English class speaks during a debate clinic. *photo by Bryan Hester*



A UA biology mentor assists high schoolers with a photosynthesis lab. *photo by Bryan Hester* ABOVE: High school students preparing for AP chemistry perform lab experiments and solve problems in the classroom.

changed their views of children living in poor communities. “I used to believe picking up a book and studying was the only thing a child needed to do, but now I understand that there are a thousand more obstacles for a child living in poverty before he or she can even open a book,” says Spencer Vaughn, a sophomore from Vestavia Hills, Ala., majoring in accounting.

In addition to helping high schoolers learn academic material, mentors advise them on applying to college and for scholarships and give them tips on the types of courses to take once they arrive on a university campus.

Fallon Davis, a 12th grader at Paul W. Bryant High

School in Cottondale, Ala., says working with the college students was fun and exciting. “Besides teaching us calculus, they also talked to us about their college experiences so that we could learn from them,” Davis says.

Taylor says the knowledge she gained through the CollegeFirst program helped her do exceptionally well in her AP computer-science class and was worth sacrificing three weeks of summer break. “My CollegeFirst experience was one of the best experiences of my summer, and I have no regrets,” she says.

To learn more about CollegeFirst, visit cesr.ua.edu or contact CESR at cesr@ua.edu or 205-348-6490.