



Virtual Advanced Placement (VAP) Program

Niagara Falls City School District VAP Program

Program Overview

Niagara Falls City School District (NFCSD) includes eight elementary schools housing grades Pre-K through six, two preparatory schools housing grades seven and eight, and one high school, all of which qualify for school-wide Title 1 funding due to their high free or reduced-price lunch rates. The District educates approximately 7,000 annually, of whom 65% are eligible for free or reduced-price lunch. The student population is 53% Caucasian, 35% African American, 4% Native American, 3% Hispanic, 2% Asian and 2% Multi-racial.

The vision for the District's Advanced Placement (AP) Program includes a combination of classroom-based AP courses and virtual AP courses which together will meet the needs of a diverse student body, increase student access to AP courses in which they are interested, and increase sustainability following the grant period. AP Program expansion will be concentrated on STEM courses, although other courses will also be included.

The District's vision has been developed following implementation of programs designed to expand classroom-only AP instruction funded by the U.S. Department of Education and which included professional development opportunities for teachers. This funding enabled the District to provide programming for younger students, particularly those from minority or economically disadvantaged backgrounds, to help them develop skills that would promote success in AP courses in the future, increase the course offerings available, and increase the number of teachers qualified to teach Advanced Placement courses. Sustaining the model has been a challenge.

Some AP courses, while essential to particular students' academic and career goals, have been too poorly attended to be maintained. Many AP courses are only offered once during the school day and, when this time period conflicts with another course the student needs to take, access to the AP class becomes problematic. In addition, the District typically has 40 to 50 students on home instruction, approximately half of whom are capable of taking Advanced Placement courses. However, teachers providing instruction in the home are typically not trained to provide AP instruction, preventing these students from participating in these courses. Thus, the current District model is limited.

Program Activities

Currently 15 District teachers are certified to teach one or more AP courses. The District anticipates training up to 10 more teachers, and providing up to 20 teachers with professional development in virtual AP support.

The District high school has computer and science labs required to support Advanced Placement and virtual Advanced Placement programming. These will be available to all students participating in virtual or classroom-based Advanced Placement instruction. Further, the District is purchasing tablet computers to support student access to virtual learning opportunities. Additional tablet computers will be purchased through the VAP grant to assure that students interested in taking virtual AP courses have access to those courses and appropriate hardware to access those courses.

To more effectively meet the needs of students, expansion of the existing classroom-based AP model to include virtual AP classes would:

- Increase student access to courses by enabling them to take online courses at times convenient to them, including completing coursework online during non-school hours.
- Eliminate conflict for students who wish to take two concurrent courses.
- Enable students who are capable of success in an AP course, but who are not receiving instruction at the high school, to access higher-level academic programming

The foundation for a strong, blended AP Program focusing on math and science has been created within the District. In 2007, NFCSD received a Title II-B Mathematics and Science Partnerships (MSP) grant from the NYS Education Department which enabled the District to expand a smaller initiative started with an earlier MSP grant received by Buffalo Public Schools and implemented in partnership with NFCSD. That grant supported implementation of a project known as Futures in STEM, designed to increase the integration of science, technology and mathematics coursework with English Language Arts and with STEM courses. The project used a quasi-experimental design and served half of the District, including four elementary schools, one preparatory school, and two of the four houses at Niagara Falls High School. The MSP cohort was comprised of 204 participating teachers out of the School District's 640 teachers. Participating teachers were required to complete 60 hours of embedded professional development yearly over the three-year grant cycle. Forty-one of those teachers have further opted to take 18 graduate credit hours to become Math/Science/Technology (MST) content specialists through a special program designed for this purpose at Niagara University.

Repository

The Niagara Falls City School District also intends to collaborate with statewide Virtual AP stakeholders to develop additional virtual AP coursework which would then be shared statewide.

Professional Development

Science and math instructional coaches were trained and placed in each participating school to provide embedded professional development. Niagara University, a critical partner in the provision of professional development in this project, developed a Math, Science, Technology (MST) Master's Degree Program enabling 41 teachers to pursue a Master's Degree and become teacher leaders in their schools. The MSP Initiative has produced systemic change bringing inquiry-based practices into an integrated teaching and learning environment. Each of the participating schools is now equipped with teachers who have expanded their content knowledge in science and mathematics, integrated literacy strategies into all STEM content, and integrated technology as a vital instructional tool. Through the support of an instructional coach model for professional development, teachers in these buildings who may not have had a preference for science content have become more comfortable and have transitioned to teaching science as an investigation, expanding their knowledge and experimenting with new teaching strategies. Science and math instructional coaches offer training in science and math content, inquiry processes and the workshop model of instruction, MST integration, engineering design, interactive white board technology, Lab Volt and in various district-wide technology initiatives. As a result, District students receive creative, engaging science and mathematics instruction and the District has a cadre of teachers highly qualified to provide engaging science and math content for all students and to support students' pursuit of AP-level coursework in those subjects.

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