

# **DISTANCE LEARNING PROGRAM: COMPREHENSIVE EVALUATION**

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# **DISTANCE LEARNING PROGRAM: COMPREHENSIVE EVALUATION**

## **EXECUTIVE SUMMARY**

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On October 5, 2010, the School Board approved the Distance Learning Program Evaluation Readiness Report including the program goals and objectives, the evaluation plan, and the recommendations concerning the evaluation of the program. The recommended evaluation plans were to conduct a comprehensive evaluation during the 2010-2011 school year, focused on program implementation, student academic outcomes, and stakeholders' perceptions of program quality. This evaluation report is based on the School Board-approved plan and focused on the operational components of the program, characteristics of students who participated in the program, progress made toward meeting the goals and measurable objectives of the program, stakeholders' perceptions regarding the program, and the cost of the program to the school division. The evaluation was based on both quantitative and qualitative data that were collected through surveys, reviews of documents, classroom observations, and data from the Virginia Beach City Public Schools (VBCPS) data warehouse. The evaluation was focused on the videoconferencing components of the Distance Learning Program, which include Quality Connection and Videoconferencing On Wheels.

## **SUMMARY OF EVALUATION FINDINGS**

### **Operational Components of the Program**

- The Distance Learning Program comprehensive evaluation focused on the videoconferencing components of the program – Quality Connection and Videoconferencing On Wheels (VOW). The Quality Connection provides daily instruction via two-way videoconferencing using the stationary Distance Learning Lab located in each middle and high school and allows for live interaction between the instructor and students at the remote site(s). The Videoconferencing On Wheels utilizes several mobile videoconferencing units that can be deployed in any classroom or office in the school division and acts as a complementary option to the Quality Connection component of the program by allowing additional opportunities for students, teachers, staff, and administrators in VBCPS.
- The process to determine what courses would be offered through the Quality Connection component of the Distance Learning Program occurs in February of each year. Prior to the meeting, the distance learning administrators are required to forward all course requests to the division's distance learning coordinator. The overall goal of the meeting is to address as many course requests from schools in order to offer opportunities to students that would not otherwise be available. In addition, the meeting goals include balancing the needs in the schools with complexities related to scheduling distance learning courses, the need to adhere to the enrollment guidelines for the program, and the desire to keep qualified teachers who provide instruction in hard-to-staff foreign language areas. Generally, most course requests are approved if qualified staff is available, scheduling issues are addressed, and staff allocations do not exceed maximum allotments.

- In order to assess general perceptions regarding the annual scheduling meeting, administrators were asked to indicate their level of satisfaction with the overall process during the annual meeting. All administrators indicated they were very satisfied or satisfied with the scheduling process.
- In considering which course requests to forward to the distance learning coordinator, administrators review information related to the number of students enrolled in a course; the number of requests for a specific course; the type of course, such as second-level courses or foreign language courses; and the overall needs of students within the building. All administrators indicated a majority of the course requests for the Distance Learning Program received from within their school were included in the course requests forwarded to the Department of Technology.
- According to Department of Technology staff, qualified teachers and teacher assistants are selected by their building principals to teach a requested course and are selected based on the same selection process used throughout the school division. Building principals are encouraged by the Department of Technology staff to hire staff who are comfortable learning and using technology to ensure effective integration of technology into classroom instruction.
- Regarding demographic characteristics of distance learning teachers, 57 percent of teachers at the middle school level and 67 percent of teachers at the high school level were Caucasian, while 43 percent of teachers at the middle school level and 17 percent of teachers at the high school level were Asian. There were no African American or Hispanic distance learning teachers at the middle school level. However, at the high school level, 11 percent of distance learning teachers were African American, while 6 percent were Hispanic. Results indicated that most of the teachers in the program were female (86% at the middle school level and 61% at the high school level).
- A lower percentage of distance learning middle school teachers held an advanced degree compared to the division at the middle school level, while the percentage of distance learning teachers at the high school level who held an advanced degree slightly mirrored the division at that level. Although the average years of experience for middle school distance learning teachers was lower than the division at that level, the average years of experience for high school distance learning teachers was higher than the high school division level.
- According to the Department of Technology staff, all teachers and distance learning teacher assistants (DLTAs) who are new to the Distance Learning Program are required to complete mandatory training which includes the use of the VBCPS Distance Learning Labs. There is also refresher training for experienced distance learning teachers that focuses on updating their skills in distance learning instruction.
- Distance learning staff received technological and resource support from the Department of Technology's Help Desk or the Distance Learning Program staff for issues related to TV monitors, cameras, microphones, and laptops. In addition, staff received technological training related to classroom instruction, as well as training that addressed the administrative and technical supports and resources available to distance learning staff.
- Participants received training on strategies and techniques that are a part of distance learning instruction such as ensuring classroom instruction includes opportunities for students to interact

in group assignments; ensuring students feel as if they belong to a cohesive unit as opposed to two to three separate classes; visiting the receiving sites on a regular basis in order to improve student and teacher interaction; ensuring proficiency in the use of technological equipment; and having a course of action in place to address technical problems skillfully with minimal disruption to instruction.

### **Characteristics of Students Who Participated in the Program**

- There were 1,451 students enrolled in the Distance Learning Program. Sixty-six percent, or 953 students, were in middle school, while 34 percent, or 498 students, were in high school. A larger percentage of students in the program were male (54%) and Caucasian (59%) compared to other demographic groups within the program. Twenty-two percent of students in the program were identified as receiving free/reduced lunch, 4 percent were identified as receiving special education, 24 percent were identified as gifted, and 1 percent was identified as limited English proficient.
- A larger percentage of the students in the program were male, Caucasian, and identified as gifted when compared to the division. The program had a lower percentage of students receiving free/reduced lunch and identified as receiving special education services compared to the division's overall percentages. There were similar percentages between the division and the program for students identified as limited English proficient.
- Course enrollments based on the duplicated cumulative count of students enrolled in the Distance Learning Program at any point during the 2010-2011 school year totaled 1,492. Generally, there were a few students who enrolled in more than one distance learning course during the school year, at the high school level.
- Exploratory courses at the middle school level included French, German, Japanese, and Latin. Among the exploratory courses, Exploratory Japanese had the highest course enrollment at 296 and Exploratory German had the lowest enrollment at 59.
- Yearlong courses at the middle school level included French I and II, German I, Japanese I and II, and Latin I. Among yearlong courses at the middle school level, Japanese I had the highest enrollment at 97 and French II had the lowest at 19.
- High school courses included five advanced placement courses: AP Art History, AP French, AP Government: Comparative, AP Music Theory, and AP Japanese. In addition, high school distance learning courses included French IV and V; German III and IV; Japanese III and IV; Latin II/III and IV; Music Theory I and II; Russian I, II, and III; and Spanish V. The high school courses with the highest enrollments included Russian I at 106, German III at 55, and Music Theory I at 51. Advanced Placement Japanese, French V, and German IV had the lowest course enrollments.

## **Progress Made Toward Meeting the Goals and Measurable Objectives of the Program**

### **Goal 1: Equity in Course Offerings**

- In order to determine if students within VBCPS are provided equal access to course offerings regardless of enrollment site, an analysis of course requests and offerings was conducted. Of the 39 courses requested, 77 percent of them were offered by the Distance Learning Program. All courses that were requested at the middle school level, with the exception of Spanish I and II and German II, were placed on the distance learning schedule and offered as a course during 2010-2011. Accounting, Advanced Accounting, AP Calculus BC, AP German Language, AP Statistics, and Russian IV were the six courses at the high school level that were requested but were not offered during the 2010-2011 school year.

### **Goal 2: Serve as a Viable Medium to Offer Otherwise Unavailable Educational Opportunities**

#### **Quality Connection**

- As a result of the Distance Learning Program, students were provided the opportunity to take 29 different courses, which would have been otherwise unavailable to them at the time in which they needed the course due to low enrollment, scheduling, or staff availability issues.
- Middle school students can obtain Carnegie credit for taking high school courses while enrolled in middle school. The Distance Learning Program provided otherwise unavailable educational opportunities to middle school students taking a distance learning course by offering six courses for Carnegie credit. Of the 953 middle school students enrolled in the Distance Learning Program, 34 percent, or 328, were afforded the opportunity to earn a Carnegie credit. Ninety-eight percent of distance learning students who enrolled in a Carnegie credit-bearing course were rewarded with a Carnegie credit.
- Perception data from the stakeholder survey about key program components were disaggregated into seven groups. Data included results from three groups of students including middle school students who took an exploratory course, middle school students who took a yearlong course, and high school students who took a yearlong or semester course. Staff data were based on perceptions from distance learning teachers, distance learning teacher assistants (DLTAs), and administrators. Survey data also included responses from parents.
- Stakeholders were asked questions related to the level of academic challenge the distance learning course offered and the level of comfort students felt in participating in class discussions. Across each student group, at least 50 percent or more agreed their distance learning course was academically challenging (50% to 69%). At least 91 percent of staff and administrators agreed distance learning courses were academically challenging (91% to 100%), while nearly three fourths of parents agreed distance learning courses were academically challenging for their child. Regarding classroom participation, approximately 76 to 100 percent of students within each group, staff, and administrators agreed students felt comfortable participating in class discussions, with 85 percent of parents agreeing their child felt comfortable participating in classroom discussions.

- Concerning questions related to technical and connectivity issues, across each student group, 74 percent or more indicated their teacher was often able to use the technology properly, with the lowest percentage from students at the high school level who took a yearlong or semester course (74% to 82%). Among staff, at least 90 percent indicated the teacher often used the technology properly (90% to 96%).
- Regarding how often a class experienced technical difficulties with the distance learning technology, across each student group, 21 to 49 percent reported having technical difficulties often during class instruction with the largest percentage among those at the high school level who took a yearlong or semester course (49%). While no administrators and a limited percentage of DLTAs (13%) indicated distance learning classes had technical difficulties often, 38 percent of distance learning teachers indicated that they experienced technical difficulties often during classroom instruction. Twenty-four percent of parents indicated their child's distance learning classroom often experienced technical difficulties, while 25 percent indicated they did not know how often their child's classroom experienced technical difficulties.
- Among those who indicated technical difficulties occurred during classroom instruction, across each student group, 69 to 87 percent of students agreed that any technical difficulties were promptly addressed. Among staff members, there was high agreement among administrators (93%) and DLTAs (86%) compared to distance learning teachers (74%). While some parents indicated they did not know how prompt the response was to addressing technical difficulties (25%), among those who indicated technical difficulties occurred, 65 percent agreed the difficulties were addressed in a prompt manner. Parents had the lowest level of agreement across all groups regarding this issue.
- In order to gauge survey participants' perceptions regarding the use of technology as a critical part of distance learning instruction, respondents were asked if the technology used for the course was a barrier to learning the course content. There was some variation in opinions between students and staff with students more likely to agree that technology was a barrier to learning the course content compared to staff (23% to 40% for each student group and 0% to 14% for staff). The largest percentage of students that indicated technology was a barrier to learning the course content were those students at the high school level who took a yearlong or semester course.
- Thirty-eight percent of distance learning teachers indicated that on average between 6 and 29 minutes of instructional time is lost per month due to technical issues related to audio and video. For administrative issues like fire drills, mismatched schedules, and assemblies, 38 percent of distance learning teachers indicated 30 minutes or more of instructional time is lost per month. The DLTAs had a different perspective on the average amount of instructional time lost due to technical and administrative issues. The largest percentage of DLTAs (48%) indicated 5 minutes or less is the average amount of instructional time lost due to technical issues, and 39 percent indicated that between 6 and 29 minutes is lost to administrative issues per month.
- Among survey respondents involved in the Quality Connection component of the program who received instruction from the remote sites, at least 60 percent or more indicated the video and audio quality of the system was good (60% to 79%).

- Across student groups, from 77 to 88 percent agreed that they received adequate support and resources in the Distance Learning Program, 83 to 96 percent of staff agreed students received adequate support in the program, and 86 percent of parents agreed their child received adequate support and resources in the program.
- Distance learning teachers and DLTAs were asked about the support provided by the DLTAs to distance learning teachers during classroom instruction. The pattern of responses among multiple survey items demonstrated that perceptions regarding support were more positive among DLTAs than distance learning teachers, with 91 to 96 percent agreement among DLTAs and 79 to 86 percent agreement among distance learning teachers.
- When asked how they would rate the support they received from their schools' administration for issues related to stipends, travel, and ordering materials, 86 percent of distance learning teachers indicated they were very satisfied or satisfied with their schools' support, compared to 78 percent of DLTAs who received support from their schools' administration for issues related to the SharePoint site, monthly reports, budget, and ordering materials.
- At least 79 percent of participants across each group indicated they were very satisfied or satisfied with the technical support they received from DOT's Help Desk or the Distance Learning Program staff. The highest level of satisfaction was from distance learning teachers (86%), followed by DLTAs (83%) and administrators (79%).

### **Videoconferencing On Wheels**

- During 2010-2011, there were 1,106 participants who took part in an event that utilized the Videoconferencing On Wheels system. The VOW system allowed students to communicate about projects related to art and music, book clubs, and SOL preparation. In addition, the VOW system allowed connections outside the division for such activities as reading sessions with Mrs. Claus from the North Pole, virtual field trips to the International Wolf Center, Anza Borrego Desert State Park, NASA, and guest speakers, which would have been otherwise unavailable to students.
- The VOW system also provided a few otherwise unavailable educational opportunities to staff members. The VOW system was used to provide instruction for the Department of Curriculum and Instruction's Math Coaching program and for staff within the Office of Programs for Exceptional Children (OPEC) who took a course entitled *Applied Behavior Analysis: Verbal Behavior*. The VOW system was also used for meetings between teachers at different schools and a training session for teachers with the Center for Science and Industry.
- A question regarding the quality of the video and audio components of the VOW system was asked of participants. At least 84 percent of all participants indicated the picture and sound were of good quality (84% to 100%).
- Technical resources and support were also provided to computer resource specialists involved in the VOW component of the program. There was overwhelming agreement among computer resource specialists regarding the technical resources and support they received from the Department of Technology regarding the VOW system. Ninety-one percent of computer resource specialists indicated that the VOW system request form was clear and easy to

complete. All computer resource specialists indicated that the Department of Technology delivered and picked up the VOW system as scheduled, 91 percent indicated the system was set up correctly and a test call was conducted properly, and all computer resource specialists agreed the Department of Technology provided adequate training on the use of the VOW system.

### **Goal 3: Utilize Instructional Staff Efficiently**

- In order to address the needs of students within the Distance Learning Program, the division utilized 32 teachers to provide instruction for 29 different courses and 162 classes (receiving and sending sites). Due to the nature of the Distance Learning Program, it is possible to combine students from multiple sites into one class and have current staff members provide instruction in distance learning courses. Teachers who teach courses within the Distance Learning Program were generally full-time equivalent (FTE) VBCPS employees (97%).
- The division has efficiently utilized 32 teachers to provide instruction for 59 course sections and 1,451 students, with 11.8 additional FTE allocations during the 2010-2011 school year. On average, distance learning teachers taught 2.1 distance learning course sections at the middle school level and 1.6 distance learning course sections at the high school level. Depending on course sections, teachers instructed from 10 students to 190 students.

### **Goal 4: Provide Effective Training and Support**

- Regarding professional development training, at least 62 percent of distance learning teachers indicated attending a training provided by the Department of Technology at some point in the past, while 87 percent of DLTAs indicated they had attended a training provided by the Department of Technology at some point in the past.
- Overall, DLTAs were more likely to indicate that training related to technical areas was very effective compared to distance learning teachers. For DLTAs, the components of the training with the highest percentage of respondents indicating that it was very effective included hands-on training and dealing with power and video issues, laptop display and connection issues, and training related to the Fn+ F4 function keys. The areas with the highest percentage of distance learning teachers indicating that the training was very effective included the collaboration mode of the equipment, microphone tips, and using visual aids in the classroom.
- Distance learning teaching assistants were also more likely to indicate that training topics related to the administrative needs of staff were very effective compared to distance learning teachers. The DLTAs were most likely to rate training related to the student/parent contract as very effective, followed by the distance learning teacher rubric/responsibilities documents, the DLTAs rubric/responsibilities documents, and monthly reports. Distance learning teachers were most likely to rate training topics related to travel and stipends as very effective compared to other administrative areas covered in the training.
- Staff and administrators were asked how effective the training was in providing them with the skills they needed to conduct their distance learning course. At least 79 percent of administrators and 70 percent of DLTAs indicated the overall training provided the skills needed to conduct the course. The lowest percentage was from distance learning teachers at 44 percent.

- Distance learning teachers and DLTAs recommended that additional training opportunities be focused on the following: more hands-on training, troubleshooting technical issues, using additional monitors, reviewing staff roles and responsibilities, discussing interpersonal issues, initiating a process that would require DLTAs and substitutes to introduce themselves at the beginning of each class, in order for the sending site teacher to have an idea of what instructional assistant is able at the receiving site(s) on a particular day.
- Learning plans were reviewed for evidence of strategies and techniques addressed during the training and used by teachers. The strategies and techniques assessed throughout the learning plans related to interactive features such as group work and presentations, which allowed students in the distance learning program to collaborate and work together. Evidence was found in the learning plans for each of these types of activities, with the most evidence of some type of whole-group activity.
- Classroom observations were conducted to investigate the various strategies and techniques utilized within distance learning classrooms. The *Distance Learning Classroom Observation Checklist* had six different concepts related to distance learning classroom instruction: instruction, classroom management, delivery, technology, professionalism, and classroom participation.
- Classes were observed in order to determine the extent to which interactive features were a part of the classroom instruction. Most of the classes observed incorporated some type of interactive feature such as group work or some type of presentation. Evidence of group work included working in pairs or groups to practice conversations in a foreign language, while evidence of presentations included students presenting information to classmates regarding the political issue of the day and students providing a brief presentation based on a pop culture issue in a foreign language.
- Facets of classroom management included the instructor being organized and prepared for class, providing clear directions, and starting and ending class on time. All sites observed appeared to have materials that were prepared and available at each site, and all instructors provided clear directions to students and staff. In addition, students and staff knew what was expected of them during the course of the class period, and classes generally started and ended on time.
- Evidence of classroom delivery included the instructor addressing the teacher camera, speaking clearly and skillfully using the microphone, and delivering instruction in an energetic, spontaneous, and animated manner. There was a wide variation in behavior among teachers and how often and in what way they addressed the teacher camera. Most teachers had a mixed method of partly addressing the teacher camera and partly making eye contact with students at the sending site. There were a few teachers who rarely looked into the teacher camera, which in most cases translated into having limited interaction with students at the receiving site. Most teachers made an effort to be animated and energetic in their delivery of classroom instruction.
- A majority of classes did not experience any notable technical difficulties, and those that did experience some type of difficulty made efforts to immediately address the issue. Technical difficulties involving video included brief instances of nonessential items located on the monitor, such as the menu for the monitor or a logo of a sun in the upper corner of the monitor, the screen spontaneously going dark for a brief moment, or lagged delays in the monitor

display when switching from sites or to the document camera. Regarding audio, there were occasions of hearing an echo or feedback or general difficulties from not being able to hear clearly what was being said by students and/or the teacher at other sites. The source of the audio difficulties could be a combination of equipment and the need for students to project their voices when they are communicating with other sites.

- Professionalism among staff and students was also observed during the classroom visits. Most classroom observations consisted of the teacher and the DLTAs working as a team to provide effective instruction to students in the Distance Learning Program. There was no evidence of disagreements on camera, rudeness, or disrespectful behavior between staff members. Overall, classes maintained a safe academic environment. It did not appear that students felt uncomfortable expressing their opinions or answering questions posed by the teacher or another student.
- Another integral part of the Distance Learning Program is the ability to participate and feel a part of the classroom experience. A majority of teachers worked toward ensuring that students from all sites participated in classroom instruction. Teachers ensured classroom participation by calling on students individually, encouraging and offering feedback to students, and using the zoom feature on the camera to encourage participation and to initiate the sense that all students are part of one class. There were a few classes where efforts to integrate students from each site was limited. Regarding the responsiveness of teachers to students' questions, all teachers were responsive and addressed questions posed by students. While there was participation between students within each site, opportunities to participate between sites were minimal.
- Students, staff, and administrators were asked a series of survey questions related to the strategies and techniques evident in distance learning classrooms. Within the student groups, there was variation in the level of agreement regarding distance learning classroom strategies and techniques. At least 91 percent of middle school students who took an exploratory course agreed with the survey items related to classroom strategies and techniques, while at least 77 percent of students at the middle school level who took a yearlong course and 78 percent of those at the high school level agreed with the survey statements.
- Regarding strategies and techniques evident in distance learning classrooms, there were exceedingly high levels of agreement among distance learning teachers and DLTAs. At least 90 percent of distance learning teachers agreed with each survey item (90% to 97%) and at least 87 percent of DLTAs agreed with each survey item (87% to 96%). Overall, there was a high percentage of agreement among those administrators who were able to observe a distance learning classroom during the school year (76% to 100%).
- Both distance learning teachers and DLTAs were asked how often teachers traveled to the receiving site(s) during the 2010-2011 school year. Generally, among distance learning teachers, 83 percent indicated they had traveled to the receiving site(s) at least once a quarter, and 70 percent of DLTAs indicated that teachers traveled to the receiving sites at least once per quarter.
- Distance learning teachers, DLTAs, and administrators were asked to provide their overall agreement level regarding whether they received effective support from the Department of Technology. At least 87 percent of staff and administrators agreed that the Department of Technology provided effective support to distance learning staff located in the schools (87% to 90%).

- Regarding educational opportunities provided by the program, survey participants were asked if the Distance Learning Program enriched students' educational experiences. Across each student group, at least 63 percent of students agreed that the Distance Learning Program enriched their educational experiences (63% to 84%). Among staff and administrators, at least 78 percent agreed the program enriched students' educational experiences (78% to 100%), and 81 percent of parents agreed the program enriched their child's educational experiences.

#### **Goal 5: Ensure Students Gain Similar Learning Outcomes in Distance Learning Compared to a Traditional Setting**

- There were 1,324 distance learning students who had an end-of-course grade for their distance learning class and 5,530 nondistance learning students who had an end-of-course grade for the same courses offered in the Distance Learning Program. Comparisons between the two groups of students indicated that they were similar demographically, with distance learning students having a slightly larger percentage of males compared to those students in the nondistance learning group.
- Overall, distance learning students had a 99 percent passing rate (e.g., grades of "A" through "D") in courses offered, while the passing rate for nondistance learning courses was 95 percent. Distance learning students appeared to be performing similarly or slightly better than those receiving instruction in a traditional setting for the same courses.
- Course performance was also compared between students at the sending sites and students at the receiving sites. The analysis focused on the percentage of students who received an "A" or "B" in the courses. Results indicated moderate differences between the two groups, with 89 percent of students at the sending sites receiving an "A" or "B" and 85 percent of the students at the receiving sites receiving an "A" or "B."
- Additional comparisons were made between distance learning students and students taking the same course in a traditional classroom setting. Of middle school students in an exploratory course, 98 percent of distance learning students earned an "A" or "B" compared to 92 percent of students in a traditional classroom setting. Of middle school students who took a yearlong course, 81 percent earned an "A" or "B" compared to 71 percent of those in a traditional classroom setting. Less variation was seen at the high school level, with 79 percent of distance learning students earning an "A" or "B" compared to 77 percent of students in a traditional classroom setting.
- In order to further assess the goal that distance learning students receive the same level of instruction compared to students in a traditional classroom setting, an additional analysis was conducted. The analysis included a review of the courses offered to students in the Distance Learning Program and to nondistance learning students which were taught by the same instructor. Overall, results were mixed regarding the performance of distance learning students compared to nondistance learning students in classes taught by the same teachers. Distance learning students performed better in some courses, while nondistance learning students performed better in other courses taught by the same teacher.
- Survey results among students indicated differences in experiences, particularly between middle school students taking an exploratory course and students at the high school level taking

a yearlong or semester course. Compared to other student groups, a larger percentage of exploratory students indicated that the distance learning course was about the same or more interesting than the traditional course (89%) and that they learned about the same or more in the distance learning course compared to a traditional course (89%). In most cases, students at the high school level had the lowest percentages on survey statements related to comparing distance learning courses to traditional courses. Less than half of high school students indicated the distance learning course was preferred about the same or more than a traditional course (46%) and that the level of teacher-to-student interaction was about the same or more than the traditional course (47%).

- Across all stakeholder groups, teacher-to-student and student-to-student interaction had some of the lowest responses when comparing experiences students had in a distance learning course compared to a traditional course, with percentages ranging from 47 percent to 74 percent for teacher-to-student interaction and 55 percent to 73 percent for student-to-student interaction.
- Based on survey responses, across each student group, 76 to 89 percent of students agreed that the Distance Learning Program engaged students in the learning process, with students at the high school level having the lowest agreement level (76%). At least 91 percent of staff and administrators agreed that the program allowed students to be engaged in the learning process (91% to 100%), and 89 percent of parents agreed the program engaged their child in the learning process.
- The positive attitudes regarding distance learning increased over the nine-week period for exploratory students. Of students in an exploratory course, 87 percent indicated that their attitude toward distance learning was positive at the beginning of the course, and 91 percent of students indicated a positive attitude toward distance learning at the end of the course. For students at the middle school level who took a yearlong course and those at the high school level who took a yearlong or semester course, there was a decrease in the percentage who indicated positive attitudes toward distance learning at the beginning of the course compared to the end of the course.

#### **Goal 6: Act as a Viable Option for Administrative and Training Opportunities**

- There was 100 percent agreement among administrators, teachers, and those who participated in an administrative or training event that the VOW system is an important tool in providing educational opportunities within VBCPS, while 82 percent of computer resource specialists indicated that the VOW system was an important tool.
- All administrators and teachers agreed that the VOW system is a viable alternate delivery option, along with agreement from 94 percent of those who participated in an administrative or training event and 91 percent of computer resource specialists.

#### **Stakeholders' Perceptions of the Program**

- Surveys were administered to participants in both components of the program – Quality Connection and Videoconferencing On Wheels. Stakeholders within the Quality Connection component of the program included students, teachers, DLTAs, administrators, and parents, while VOW stakeholders included students, training participants, teachers, computer resource specialists, and administrators.

## Quality Connection Survey Results

- When asked about their overall perception of the Distance Learning Program, across each student group, 61 to 91 percent of students indicated an overall rating of the program as excellent or good, with students at the high school level having the lowest percentage (61%). Among staff, at least 79 percent rated the program as excellent or good (79% to 96%), with the lowest percentage from distance learning teachers. Among parents, 79 percent rated the program as excellent or good.
- Survey participants were asked if the program met their expectations. Across each student group, 68 to 91 percent of students indicated the program had exceeded or met their expectations, with students from the high school level having the lowest percentage (68%). Among staff, at least 79 percent indicated the program had exceeded or met their expectations (79% to 83%), with the lowest percentage from distance learning teachers. Eighty percent of parents indicated the program exceeded or met their expectations.
- Both parents and students had similar expectations regarding course grades, with 96 percent of parents indicating their child would obtain a passing course grade and 95 percent of students indicating they expected to receive a passing course grade. As results indicated, students' and parents' expectations regarding end-of-course grades were accurate.
- Across each student group, 56 to 86 percent of students strongly agreed or agreed that they would recommend the Distance Learning Program, with the lowest level of agreement from students at the high school level who took a yearlong or semester course (56%). Seventy-three percent of parents indicated they would recommend the program.
- With regards to overall program satisfaction, across each student group, 66 to 90 percent of students indicated they were very satisfied or satisfied with the program, with students at the high school level demonstrating the lowest percentage who were satisfied (66%). Among staff and administrators, at least 72 percent indicated they were very satisfied or satisfied with the program (72% to 87%), with distance learning teachers reporting the lowest percentage of satisfaction. Seventy-seven percent of parents indicated they were very satisfied or satisfied with the Distance Learning Program.
- When asked about the benefits of the program, staff mentioned the opportunity for students to take a course that would have been otherwise unavailable to them, the opportunity to be exposed to technology in a manner that is readily available at colleges and universities, and the enjoyment of learning new things such as different languages, cultures, and technology.
- Among students, the most common mentioned benefit of the program was the opportunity to have a class and interact with students from other schools within the division. Students also mentioned the opportunity to learn something new, such as a foreign language or aspects of different cultures and the opportunity to experience technology in the classroom in a different way compared to the traditional classroom. Other students mentioned that the program offered the opportunity to take a course that they would not have normally been able to take, the benefits of being in a small classroom, the opportunity to meet caring teachers and DLTAs, and the realization that in order to be successful in the distance learning class, the student needed to be self-regulated.

- According to parents, the Distance Learning Program afforded their child the opportunity to take a course that was otherwise unavailable, interact with students at other schools within the division, and offered their child the chance to learn a new foreign language. A few parents also mentioned that the program required their child to be more focused and improved the child's study habits, while others indicated the course introduced their child to technology and how it could be used to provide information.
- The most common improvement area mentioned among staff was the need to align the schedule between connecting schools. Distance learning teachers and DLTAs were asked on the survey about the mismatched schedule between schools. Approximately 72 percent of distance learning teachers and 74 percent of DLTAs indicated that the mismatched schedule is a challenge that impacts classroom instruction. The second most common improvement was related to technology. The third most common improvement mentioned among staff is the need to make the courses, specifically exploratory courses, more challenging for students.
- Students offered some suggestions on how to improve the program as well. The most common suggestion related to technical issues. Students indicated that there were occasions in which the teacher's microphone was too loud or too soft or the battery in the microphone died, while others mentioned the quality of the monitors and the need for bigger monitors in order to have a better visual of documents that are placed on the monitors. Students at the receiving sites would like the teacher to visit more often in order to improve interaction with the teacher, while other students would like more interaction with students at the other sites and schools. Additional suggestions included teachers proficient in the use of the technology and course content, matching up schedules between schools, and having a "real" teacher at the receiving sites.
- Parents suggested improvements included addressing the technical difficulties associated with the audio and video system, providing more opportunities for interaction among students, ensuring teachers make more visits to the receiving sites, and ensuring the class is taught by a teacher who is proficient in the use of the technology and the course content. Other parents would like the issue to be resolved around accessing their child's grades from the Parent Portal.

### **Videoconferencing On Wheels**

- Students and staff who participated in an event that used the VOW system were asked to provide an overall rating of the VOW system. At least 87 percent across all groups indicated their experience with the VOW system was excellent or good (87% to 100%). Regarding any further interest in the use of the system, at least 82 percent of participants indicated an interest in using the system at some point in the future (82% to 100%). At least 84 percent across all groups enjoyed using the system to learn about a new topic (84% to 100%), and at least 88 percent across all groups had the opportunity to interact with others while using the system (88% to 100%).
- While students enjoyed the opportunity to interact with someone from a distance, training participants and administrators enjoyed the convenience and flexibility of the VOW system. Computer resource specialists and teachers enjoyed the interactive nature of the system which allowed students to ask questions of experts and guest speakers.

- There were a few suggestions for improving the VOW system. Among students the most common suggestion was to improve the quality of the video and audio of the system, while training participants suggested adding additional and better microphones to the system as well as to change the location of the class due to the acoustics in the training room.
- Suggestions for how the system could be used for administrative and training activities included using the system to provide citywide PDP hours, facilitation of administrative meetings, guest speakers, training staff in-house within the school building, setting up discussions with other schools, and allowing teachers to observe other teachers in action. Students offered suggestions on how the system could be used for classroom activities, which included guest speakers who are experts in their field of study, virtual field trips to the zoo and the museum, and communicating with other schools for competitions and debates.

### **Cost of the Program to the School Division**

- The total cost for the 2010-2011 school year was approximately \$1,475,663.
- Overall, personnel cost accounted for 99 percent of the total cost of the program. The \$1,465,068 cost for personnel included the additional allocations for distance learning teachers, teachers' stipends, and DLTAs.
- Other costs for the program included costs for computer/audio visual equipment (\$3,859), consumable instructional materials (\$3,185), staff development (\$1,858), transportation for teachers to visit receiving sites (\$1,590), and office supplies (\$103).

## **RECOMMENDATIONS**

**Recommendation One:** Continue to operate the Quality Connection and Videoconferencing On Wheels components of the Distance Learning Program. (Department of Technology)

### ***Rationale:***

The recommendation to continue operation of the Quality Connection and Videoconferencing On Wheels components is based on evaluation results that have shown that the program is meeting its purpose related to both components of the program.

Results indicate the Distance Learning Program has made efforts to ensure equity in the offering of courses, by offering 77 percent of distance learning course requests from schools within VBCPS. The program offered 1,451 students the opportunity to take a course that would have been otherwise unavailable due to scheduling, staffing availability, and low course enrollment issues. The Quality Connection and VOW components serve as a viable medium that offered otherwise unavailable educational opportunities to VBCPS students by offering 29 distance learning courses and by providing opportunities to connect students and staff within VBCPS and outside VBCPS. Within VBCPS, the program provided opportunities for activities related to art and music, book clubs, and SOL preparation, while outside of VBCPS the program provided opportunities to connect with others from state parks, NASA, and other educational institutions. The program effectively utilized staff with VBCPS teachers providing instruction based on the yearly needs of the students who participated in the program. In addition, the program includes training opportunities for distance learning teachers and DLTAs in order to offer quality instruction to students. Regarding distance learning students' learning

outcomes compared to students in a traditional classroom setting, results showed that students in the Distance Learning Program performed the same or in some cases slightly better than those in a traditional classroom setting. At least 72 percent of middle school students, staff, administrators, and parents indicated they were very satisfied or satisfied with the program, and at least 71 percent of middle school students and their parents strongly agreed or agreed they would recommend the Distance Learning Program. In addition, staff and administrators view the VOW system as a viable alternate delivery option for administrative and training opportunities.

**Recommendation Two:** Ensure course data information is updated in the Genesis system.  
(Schools and the Department of Technology)

***Rationale:***

During the data analysis process, it was discovered that a few courses were incorrectly identified as distance learning courses. In order to address this issue, once course changes have been made at the school level, this information should be forwarded to the distance learning coordinator, and the information should be updated in the division's official data warehouse.

**Recommendation Three:** Continue to address the technical difficulties with the equipment related to the Quality Connection component of the program. (Department of Technology)

***Rationale:***

With nearly 40 percent of distance learning teachers indicating that they often experienced technical difficulties during classroom instruction, students providing low ratings for the quality of the audio and video at the remote sites (60% to 64%), numerous open-ended statements related to video and audio issues, and classroom observations detailing the presence of technical difficulties during classroom instruction, efforts should be made to address the range of technical difficulties. Addressing the technical difficulties that have occurred should include developing a plan of action to address the issues discussed in the report.

**Recommendation Four:** Examine the survey results from high school students enrolled in a distance learning course to determine program improvements that can be made at the high school level.  
(Schools and Department of Technology)

***Rationale:***

Consistently throughout the evaluation report, perception data from students at the high school level tended to demonstrate less positive perceptions of the various components of the program. Compared to middle school students in the program, high school students had lower ratings on issues related to promptly addressing technical difficulties and were more likely to indicate the level of interaction between students and the classroom instructor is lower in the distance learning course compared to a traditional course. High school students were less likely to indicate they were engaged in the learning process, less likely to recommend the program, and had the lowest overall satisfaction with the program compared to other students.

**Recommendation Five:** Enhance training efforts for distance learning teachers and DLTAs.  
(Department of Technology)

***Rationale:***

There was some variation among distance learning teachers and DLTAs regarding the perceptions of staff support. According to DLTAs, overall they provided the needed support to

distance learning teachers during classroom instruction, with at least 91 percent agreement across all items related to support for distance learning teachers. However, among teachers the level of overall agreement regarding the same areas of support and resources was not as high. Efforts may be needed in order to enhance training for DLTAs that focuses on providing staff support to distance learning teachers. In addition, technical and administrative training topics were rated as more effective among DLTAs than distance learning teachers. For example, less than half of the teachers indicated training topics dealing with power, sound, and video issues, and any hands-on activities were very effective (32% to 48%) compared to at least 65 percent of DLTAs who indicated these training topics were very effective (65% to 80%). Efforts should be made to assess training topics that are of value to distance learning teachers. Survey participants did offer a few suggestions for additional training that may assist in this effort.

**Recommendation Six:** Provide additional opportunities for interaction among participants in the Distance Learning Program. (Schools and the Department of Technology)

***Rationale:***

Among students, one of the most common benefits of the program was the opportunity, through the use of the videoconferencing technology, to share a class with students from other schools within the division. While students were able to hear and view their classmates from other sites, there were limited opportunities for students to interact with each other across each site. Survey results indicated that across all stakeholder groups, the issue of student-to-student interaction was rated among the lowest in various survey items when compared to a traditional classroom. For example, across all student groups, at least 22 percent indicated that the student-to-student interaction in the distance learning course is less than that in a traditional course (22% to 42%). Given that one of the major components of the videoconferencing system is the opportunity to interact with others at different locations, efforts should be made to provide additional opportunities for student-to-student interaction across sites. In addition to student-to-student interaction, there is also a desire for more teacher-to-student interaction. For example, across all student groups, at least 21 percent indicated that the teacher-to-student interaction in the distance learning course is less than that in a traditional course (21% to 51%). Throughout open-ended comments related to program improvement, both parents and students indicated the need for additional opportunities for face-to-face interaction with the teacher at the receiving sites.

**Recommendation Seven:** Promote the Videoconferencing On Wheels system as a viable option for administrative meetings, professional development, and classroom instructional activities for VBCPS staff and students. (Department of Technology and Department of Media and Communication Development)

***Rationale:***

Survey results indicated overwhelming support for the use of the VOW system. At least 91 percent of staff, administrators, and training participants agreed the VOW system is a viable alternate delivery option, with at least 84 percent agreement across stakeholder groups that the system was an important tool in providing educational opportunities for VBCPS staff. In addition, at least 87 percent across all stakeholder groups indicated their experience with the VOW system was excellent or good, 82 percent indicated an interest in using the system in the future, and at least 84 percent enjoyed using the system to learn about a new topic and interact with others at a distant location. Survey participants offered a few suggestions regarding how the VOW system could be used to address administrative, training, and classroom activities. These suggestions could be used in efforts to promote the VOW system.