

Carteret County Public School System District Technology Assessment

The Technology Planning and Support Section of the Instructional Technology Division of the North Carolina Department of Public Instruction was asked by Joe Poletti, Director of Media and Technology, and Dr. David Lenker, Superintendent of the Carteret County Public School System, to conduct a district-wide assessment of Carteret County's overall Media and Technology Program. Acacia Dixon, Instructional Technology Consultant, conducted the assessment during the winter of 2004. Central office administration, principals, technology contacts, media specialists, and teachers were interviewed at randomly selected schools. In addition to these interviews, Carteret County's Technology Plan, AMTR (Annual Media & Technology Report) data, and TCO (Total Cost of Ownership) data were analyzed.

The following report addresses the steps necessary to place the entire technology program, administrative and instructional, on a unified course that stresses all five areas of the ABCs: High Student Performance; Safe, Orderly and Caring Schools; Quality Teachers, Administrators and Staff; Strong Family, Community, and Business Support; and Effective and Efficient Operation. This assessment identifies both strengths and weaknesses of the current technology program and makes suggestions for improvements in the technology program to best meet the needs of the students enrolled in the Carteret County Public School System.

High Student Performance

The Carteret County Public School System has been progressive in utilizing technology to impact student achievement in a positive way. The district leadership has actively utilized many of the resources provided by NC DPI, as well as other resources, to influence classroom events. On several occasions, the district has served as a pilot site and has been an example for the remainder of the state.

Several Carteret schools have been leaders in adopting the IMPACT Model for Technology and Media Programs offered by NC DPI. These schools have implemented flexible scheduling of media services and, in some cases, a flexibly scheduled Technology Facilitator. These schools have found creative ways to fund a position not provided by the state and yet essential to this model. In those schools that have fully implemented the IMPACT model, there is evidence of ongoing project-based learning and true integration of technology and information skills into the Standard Course of Study. There are also several other schools in various stages of implementing the IMPACT model. These schools may have a Technology Facilitator but are still adhering to a fixed media schedule. While these schools are taking strides in the right direction, they are not enjoying the full benefits that the IMPACT model can bring to their students. Some principals fear that flexible scheduling would lead to the under utilization of media resources. Training for both the administrators and faculty to ensure proper utilization of resources under the IMPACT model will allay this fear.

Carteret County has taken the initial steps to create strong media centers in each of its schools. The media allotment from the district to each school demonstrates the strong commitment of the district toward this effort. Care should be taken to guarantee that funds are distributed as equitably as possible, and wherever possible numbers such as average daily attendance should be utilized in the distribution of funds. Many media centers are also accessible during extended hours for both students and community members. In at least one facility, parents are encouraged to check out books. These activities help to promote not only reading and student achievement but also create a bond with the community. All media centers should be encouraged to operate on extended hours and to work diligently to have the media center open for the duration of the school year. Yearly opening and closing of the media centers should coincide with the opening and closing of the schools.

The Carteret County Public School System has also been a leader in the SAS inSchool program at their high schools. Carteret had utilized this program prior to the state's adoption. Since the adoption of SAS, Carteret's use of the program has only grown.

Carteret acted as a pilot LEA for both the Technology Facilitator and Media Coordinator Performance Appraisal Instruments approved by the State Board of Education in 2003. The district's feedback and participation was crucial to the process of adopting these evaluation instruments. However, several media coordinators and technology facilitators report that they are still being evaluated with the Teachers Performance Appraisal Instrument. District Administration should continue to emphasize the importance of these tools to school level administrators.

The LENC project is just one example of the use of technology and project-based learning to increase student achievement in the Carteret County Public School System. Janet McClendon remains focused on making technology a seamless part of the classroom and a tool to improve student learning. The development and dissemination of Technology Rich Lesson Plans, along with training, is instrumental in moving teachers through the skills necessary to use as an instructional tool.

In addition to these initiatives, Carteret County is actively promoting the use of instructional programs such as Accelerated Reader, CCC, and Edutest. Schools seem to have a firm grasp on the utilization of Accelerated Reader in the classroom. Most schools include a CCC lab where students receive remediation instruction. Edutest is currently being used as a benchmarking tool to acquire data on student needs. This is especially prudent in a time of data-driven decision-making and standards-based evaluation. Care should be taken at all levels to ensure that these programs do not become the driving force of the media and technology program in Carteret County.

The addition of computer networks, enforcement of copyright and software policies, and changes in computer technology may have outpaced teacher training in some cases and may have affected use of instructional technology. Some teachers claim technology has moved from the technology-rich classrooms of the mid -1990's to an assessment driven program focused on programs such as Edutest and CCC.

Safe, Orderly and Caring Schools

The North Carolina ABCs and the NCLB legislation mandate maintaining safe, orderly, and caring schools. Consistency is the key to achieving this goal. All children in the Carteret County Public School System should have equitable access to resources that enrich learning. To this end, the Technology Department is working toward improving the bandwidth for all schools within the Carteret County Public School System and if the AOL/Time Warner Road Runner plan currently under consideration is adopted and completed, all schools in the district should have equitable access to the Internet and its resources.

One of the key student safety resources available today is a video monitoring systems. The lack of such a system in all the Carteret County Public School System, especially all high schools, is a concern. Currently, only one-fourth of all of the county's schools has video monitoring in place. Two out of the 3 high schools do not have systems in place. Computer-based camera security systems should be considered for installation in all schools and maintenance and transportation offices. Such systems allow on-site monitoring and remote access to cameras via Web IP.

In addition to video monitoring, each classroom should be equipped with a telephone. According to 2003 AMTR data, just over one-half of Carteret County's schools have telephones in each classroom. This, however, leaves teachers in seven schools with insufficient access to telephones. Telephones allow for increased classroom safety and for improved communication with parents and community.

As a way to maintain an orderly and safe network for technology, the technology department has utilized hard drive protection software (e.g. Fool Proof, At Ease, or similar products) to protect individual computer integrity. Many teachers think protection software is restrictive and a nuisance. It is important that staff and faculty fully understand the need for such software in order to prolong the life of the computers and maintain realistic maintenance/service calls. Staff development sessions in this area should be considered.

Carteret County has an organized plan for the distribution of technicians. However, response time would be enhanced and loss of instructional time minimized by having on-site assistance for teachers for both technical problems and curriculum assistance. Not all schools in Carteret County have elected to have a full-time Technology Facilitator and lack this "first line of defense." The district's one fully implemented IMPACT School, Morehead Primary, reports the least number of technical issues.

Quality Teachers, Administrators and Staff

The Carteret County Public School System is constantly assessing and challenging its teachers, administrators and staff. In order to collect data on the actual use of technology within the county, the Technology Department has instituted a Computer Utilization Survey to collect snapshots of data from all schools within the district. This survey should provide

pertinent information on how, when, and why technology is used throughout the district. In addition, it will also help to pinpoint problem areas users are experiencing.

Other tools utilized by the Carteret County Public School System for developing strong personnel include the Technology Facilitator and Media Coordinator Performance Appraisal Instruments. These instruments work to ensure that media coordinators and technology facilitators are evaluated based on the skills required by their positions. The breadth and depth of these positions is far different from that of a classroom teacher. As a pilot district, Carteret County made the commitment to support media and technology positions and to add credibility to them by using the instruments provided by the State Board of Education. Media coordinators and technology facilitators should continue to be assessed using these approved evaluation instruments so that they may continue to grow in their positions. All levels of administration should work towards this goal.

Leadership from principals is perhaps one of the greatest strengths in the instructional use of technology in the Carteret County Public School System. The majority of the principals interviewed were participants in the Principals As Technology Leaders (PATL) Program. It was evident that they were able to practice the skills developed as part of the PATL Program. Several principals also require teachers to create and teach at least one technology-rich lesson per school year.

The overall approach to staff development is another strength of the Carteret County Public School System. District and school-level administrators understand the importance of quality staff development. Carteret proactively decided to maintain a continuing education requirement of 1 CEU (10 hours) per renewal cycle for teachers; however, many did not understand the requirement. Much staff development is held at the school level and is organized by school personnel. This allows for professional development to be fine tuned to meet the needs of individual teachers and the school as a whole. Perhaps the biggest issue for teachers with regard to technology staff development is time. It is difficult for teachers to see technology as a tool to implement the curriculum rather than as an added responsibility.

Janet McClendon is an invaluable staff development resource for the Carteret County Public School System. She provides mentoring and training for those schools without a technology facilitator. Unfortunately, serving six schools leaves her little time for district-wide initiatives.

One area for improvement would be in media staff development for teachers. At present, there seems to be no media staff development offered for classroom teachers. Though media coordinators do meet frequently, teachers should be trained in collaboration so that they will incorporate the media center, media coordinator and media resources into their curriculum.

Strong Family, Community and Business Support

Technology is a tool that very readily lends itself to building strong family, community and business support. The key to building strong support is communication with the outside world about technology and media initiatives through school and system level Web sites, e-mail, newsletters, etc.

Carteret County has done an outstanding job in training its Webkeepers to maintain school Web sites. These web sites, when properly utilized, offer an open window into the school for the outside world. This is perhaps one of the easiest ways to keep parents abreast of classroom events. The Technology Department in Carteret County encourages all teachers to create and save their own Web sites via Front Page. Mr. Poletti also highlights well-kept and new additions to Web sites at regular intervals instilling a healthy atmosphere of competition among the schools, teachers and departments.

As mentioned previously in this report, many schools have extended their media hours and opened their doors to parents and/or the public (See High Student Performance). Story hours and open checkout gives parents an opportunity to become involved in both their child's education and the school as a whole.

The Board of Education and the County Commissioners of Carteret County maintain a close watch on the expenditures and outcomes of all programs in the county. Such oversight guarantees that efforts are made to ensure wise investments in technology. Positive outcomes in both the technology and media programs should be highlighted for these decision-making groups and the general public. Carteret County should consider ways to celebrate its success.

Carteret County has a reputation as a leader in the state of North Carolina especially in the area of technology. Joe Poletti and Janet McClendon have continued to uphold this reputation. They have contributed various presentations and staff development exercises around the state and Mr. Poletti actively contributes to a variety of committees around the state including conference committees and the State Technology Plan Committee.

Effective and Efficient Operation

In order to manage a school system, it is essential to maintain effective and efficient operations at all times. In spite of the number of ongoing initiatives, the Carteret County Technology Department remains organized and efficient in most areas. This can be attributed to the strong leadership and sense of organization that flows through the department.

The Technology Department is well-organized with a regular schedule for technicians that includes Harry Smith spending one day a week with each technician as needed. To date, most work order requests are handled via email or through the on-site contact person (i.e. media coordinator). An online work order system would strengthen efficiency and effectiveness by allowing for the tracking of types of requests and the work of individual

technicians. The previously mentioned Computer Utilization Survey (See Quality Teachers, Administrators, and Staff) will also provide the department with data about problem areas.

The Technology Department requires that each individual use a specific login and password to access computer resources not in an effort to limit access but rather to provide additional opportunities. The Technology Department is working to provide remote access to folders for teachers and students and has already completed the process for three schools. This allows students and teachers to save work at school and then access it from home via Internet.

Carteret has found a variety of ways to use technology to save both time and resources. E-mail is the primary means of communication within the school system. In addition, Mr. Poletti is adding discussion boards to the district Web site that will allow for another avenue of communication with a limited cost. There are several efforts to move toward a paperless environment by using technology. At least one school is experimenting with an e-newsletter to teachers and parents. In addition, notices and board meeting notes are posted on the Web and personnel applications are online.

There are several issues facing the Carteret County Public School System. Sixty percent of the computers presently in use will be obsolete this year. While the bond referendum of 1994 provided a windfall of computers at that time and approximately \$1.4 million of these assets have been replaced, a consistent and timely plan for the replacement of equipment needs to be addressed. In addition, while all schools have equitable numbers of computers, the 2003 AMTR data shows that some schools are operating almost entirely with this outdated equipment. A carefully thought out replacement and dispersal plan will address this problem. Carteret is addressing its current bandwidth issues. Sufficient bandwidth is needed to provide adequate Internet access speed for all schools. Finally, Carteret County's plan to standardize on a PC platform should include the purchase of new, appropriate software and staff development to overcome teacher reluctance to make the switch from Apple software.

Several upcoming initiatives may greatly influence the efficiency and effectiveness of the Carteret County Schools Technology Department. The department is considering mobile laptop carts with wireless access for next year. As with any new addition, this will require planning to coordinate and will be an additional burden on the department. Additionally, the school district will be expected to implement NCWise within three years. Implementation of this program will be challenging with current bandwidth and computers.

Suggestions for Improvement

There are a variety of ways in which the Carteret County Public School System can improve their current technology program while at the same time maintaining the strengths of the program.

1. Many of the items mentioned in this report could be addressed through the development of a District Communication Plan. This plan should include the disbursement of information within the school system and to the outside community. For example, faculty and staff within the system should clearly understand staff development policies including CEUs requirements, etc. relating to technology. A well-thought out and implemented plan will eliminate confusion and animosity that results from poor communication. The community should also be kept abreast of district initiatives and plans. Public forums are currently being held regarding capital outlay, and this is a positive step.
2. The district should consider a Community Outreach Plan. Such a plan, which would include such events as technology fairs or open access to resources, would promote the district's image in the community, bring decision makers into the schools, and increase public awareness of the media and technology programs.
3. The district needs a Replacement and Distribution Plan to ensure equitable distribution of future resources. Such a plan would guarantee that no school will "phase out" all of its equipment at one time and should include projected new facilities and how to equip them.
4. An online work order system should be implemented to allow for more efficient and effective response to requests and to allow for the collection of data.
5. The district should continue with its plan to upgrade bandwidth at all schools and to maintain an equal bandwidth across the district.
6. Technology Facilitators, and the IMPACT model, should be considered for each individual school in the district.

Conclusion

Carteret County continues to be a leader in the use of technology in education. Unfortunately, the program is threatened by aging equipment and inequitable distribution of resources. Careful planning along with desperately needed funding will enable the Carteret County Public School System to hold true to its vision of high student achievement with media and technology as tools to enhance instruction in all curriculum areas.