# ACTT Now:

## A Collaboration Reshaping Teacher Technology Training

By Daniel E. Curry-Corcoran and Patrick M. O'Shea

Urban and suburban school divisions around the country are facing similar challenges when it comes to creating a technologically proficient teaching staff. Rural school districts are no different in this respect except for the fact that they must also find ways to address a number of other obstacles that urban and suburban technology training programs don't necessarily encounter. Two of the obstacles that directly impact the type of education rural school districts are able to provide are their distance from teacher training institutions and their relatively small size. These factors make it difficult to acquire the teacher training needed to use new technologies and to attract qualified, licensed teachers to use these technologies in the classroom. Ultimately, these two variables make rural school districts less viable candidates for teacher training initiatives, which, in turn, makes improvements in teacher training and practice difficult.

Brunswick County Public Schools (BCPS), located in rural Southside Virginia, is one such school division. High percentages of uncertified teachers, low scores on the Virginia Standards of Learning (SOL) tests, high levels of adult illiteracy, and a significant percentage of the population living below the poverty line all factor in to further hinder both the economic and educational growth of the County. In order for citizens here to compete in an ever-changing technological society, the teachers of BCPS need the technological training that will enable them to assist their students in gaining the skills that current and future in the 21st Century will demand.

BCPS has been working diligently to help their teachers develop the necessary skills to better use technology in the classroom. Since 1988 there has been a technology plan in place for all the students and teachers in the district. Even with these efforts, though, there are still a large percentage of teachers who are just beginning to enter the stages of becoming familiar with technology.

This situation has led to a developing partnership between Old Dominion University (ODU) and BCPS. The Aligning Certification with Technology Training Now (ACTT Now) PT3 Project, which just concluded its first year at the end of the 2000-2001 school year, is the driving force behind this collaboration. This grant incorporates many inventive elements working in unison to help reshape teacher technology training in the district. One of the most unique variables is a Field-Based Master's Program (FBMP). The FBMP was designed to help the BCPS teaching staff combat several pressing needs. Among these needs are:

1. alternative licensure for teachers currently working without certification, who account for a large percentage of the overall teaching staff of BCPS,
2. a general lack of technology skills needed to integrate educational technology into daily lesson planning,
3. a low level of skill in instructional strategies and design, and
4. ineffective usage of the existing, readily available technology.

In order to meet these needs, the FBMP has taken several inventive steps to provide the technology training that teachers need in order to reshape the educational practices within the County. The primary focuses of the FBMP have been:

1. to begin the training necessary for the development of 9-week technology-infused curriculum modules to assist both new and veteran teachers understand the educational goals for the County and create a program where students can have a more effective remediation process,
2. to develop a support network for teachers, university participants, and Instructional Technology Specialists within the county,
3. to train teachers in instructional strategies and curriculum design, and
4. to create avenues for teacher training in the use of existing and future technologies available in the schools.

### Curriculum Design Process

The focus that the state has placed on the Virginia Standards of Learning (SOL) has ultimately enabled BCPS to focus on making some fundamental changes in the development of the County's curriculum design process. With a genuine need for more-timely remediation to identify and help failing students, the county has com-

Table 1.

| **To what extent has the Field Based Master's Program increased your abilities in the following areas? Choose one per item.** | **To what extent increased?** | | |
|---|---|---|---|
| | Not at all or very little | To some extent | A great deal |
| ...your overall ability to incorporate technology into your teaching | 10.7% | 50% | 39.3% |
| ...your knowledge about and ability to use computers in general | 14.3% | 50% | 35.7% |
| ...your interest in using computers | 10.7% | 35.7% | 53.6% |
| ...your use of computers for communicating with parents | 64.3% | 25% | 7.1% |
| ...your ability to develop computer-based activities for student use | 7.1% | 64.3% | 21.4% |
| ...your ability to use new teaching methods involving computer technology (e.g., online projects, simulations) | 14.3% | 64.3% | 21.4% |
| ...your ability to use technology to teach basic skills and facts through drills, tutorials, and learning games | 21.4% | 53.6% | 25% |
| ...your classroom management strategies | 53.6% | 39.3% | 7.1% |
| ....the critical thinking skills you try to develop in your students | 32.1% | 53.6% | 14.3% |
| ...your students' academic achievement | 35.7% | 50% | 14.3% |
| ...the way you assess student work | 46.4% | 42.9% | 10.7% |
| ...your ability to find resources such as lesson plans on the Internet | 14.3% | 32.1% | 53.6% |

pletely re-envisioned its curriculum as a series of 9-week technology-rich curriculum modules.

This process has several strengths. Chief amongst them is its ability to detect students who are having difficulty earlier to make sure that students don't have to repeat an entire year if they only had trouble with the material covered in a particular nine-weeks period. This process effectively breaks instruction down into smaller, more streamlined sections that will allow teachers and students to focus more on particular strengths and weaknesses. At the end of this module development process, students will be required to move onto successive modules only after meeting the requirements of the previous 9-week module. Students will then also be responsible for the SOL testing at the end of specific modules, rather than the more traditional method of testing that occurs after the completion of certain grades.

With the implementation of any new program, especially one that calls for the complete restructuring of a County's curriculum, there have been a number of unforeseen obstacles in implementing this type of change. As instructors in the FBMP began working vigorously with participating teachers to begin this technology-infused module process, it became obvious that a number of different problems would eventually hinder its successful development and completion. Two of the main obstacles were the limited understanding participating teachers had regarding curriculum design and, maybe more importantly, the low levels of technological familiarity that existed among teachers of all grade levels. These obstacles, while they have caused many of the original plans for module development to be rethought, have also helped program staff to take a renewed look at what types of training teachers in the FBMP need to become more technology proficient instructors. While module development has been placed temporarily on stand-by, a new focus on discovering ways in which to help move teachers to higher levels of technology proficiency has begun.

## Technology Immersion: Modeling and Practice

Technology training lies at the heart of this process. In order to help their teachers along the integration continuum, instructors are dedicated to finding the best ways to both model technology training and provide the essential time that teachers need to develop their new skills. Each week during class, teachers rotate through a number of different sessions where they are able to work on different aspects of the course's syllabus. Each section provides a different aspect of technology training to help teachers begin to understand the impact that technology can have on their actual classroom practice.

The beginning of class is often a time when teachers are allowed to share some of their stories regarding the different ways in which they are currently using technology in the classroom. These presentations will differ according to the familiarity of teachers in using various technological applications, but its focus always remains on providing teachers with a real perspective for

the different possibilities for how technology can be used effectively.

After reviewing activities, coursework, and agenda items that relate to the entire group of teachers, they are next broken into particular grade levels where they will pass through a number of smaller sessions where instructors and other technology specialists from Brunswick County work to present and train teachers on various software, hardware components, and instructional strategies for their future inclusion in the classroom.

Working in their particular grade-level groups, teachers are provided with demonstrations of software applications and hardware devices that are available in the County. Teachers are introduced to different software packages, such as Inspiration and Kidspiration, work on developing and utilizing various WebQuests, study how to design and utilize Web pages for classroom instruction, focus on the ways in which a computer projector can assist in remedying some of the difficulties of a one computer classroom, and any other number of different technological activities that instructors may want to model and review.

Next comes the teachers' turn to experiment and develop a better working knowledge with these different technologies, and discover ways that they may incorporate these technologies into their own classrooms. As instructors circulate around the room providing assistance, individuals and groups of teachers are able to consult and experiment with different ideas regarding how technology can best serve there own teaching needs.

## Technology Integration Emphasized in the FBMP

Along with this training, one of the underlying goals of the FBMP program is to provide teachers with effective examples of different strategies for actually utilizing technology in the classroom. In order to ensure that a wide, yet concise area, of different approaches to technology integration is covered, a number of topics have been central to the entire FBMP. Due to the increasing emphasis being placed on the schools by the Virginia SOLs, one of the primary focuses has been to help devise ways for teachers to use technology to help students meet state standards in core subject areas. Different software programs have been emphasized, from helping students with reading and writing at different grade levels to different math applications, such as graphing, that are typically covered on these tests.

This has led to a variety of activities, from creating lesson plans that incorporate technology and the Internet, using software or technology activities that have already been developed, using technology to promote engaged learning, and effective use of the Internet. The focus of the program is not just to show teachers new technologies that they can use, but to effectively help them develop and use new teaching methods involving computer technology to reach their student body, many of whom are coming to school with fewer academic skills and who are ultimately more at-risk of dropping-out of school all together. Strategies that enable teachers to use software packages for brainstorming and research have proven extremely successful in helping teachers to incorporate more technology into their particular classes.

## Classroom Support

Even with instructors modeling the effective use of different educational technologies and time allotted for experimentation, teachers still need a great deal of support within the classroom to move along the integration continuum and use these strategies and technologies in their daily classroom activities.

This is where Brunswick County's Instructional Technology Specialists (ITS) come into play. While they do teach a number of the lessons in the weekly classes of the FBMP, they are also responsible for helping teachers, both in the program and in the

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County as a whole, to find ways to utilize the available technology in their own classrooms. Brunswick County Public Schools has a total of four ITS. Two ITS divide up the four elementary schools, one Instructional Technology Specialist focuses on the junior high school, and the other works with the teachers at the senior high school. These ITS are able to provide some of the one-on-one help that many teachers need to make their designs into a working model for classroom instruction.

While these ITS are not solely responsible for the integration of technology among participating teachers, they do hold a unique position in working with the teachers on a more regular basis to see how they are progressing with the integration process. Three of the four ITS working in the schools each have more than ten years of classroom teaching experience. This experience provides them with the unique ability to share realistic technological solutions to the problems with technology and classroom management that are encountered by many teachers on a day-to-day basis. Their experience both as teachers and as technology specialists give them the unique ability to come into a classroom, model an effective technology lesson, work with the teacher so that they can begin to put these practices to work for themselves, and also work to help teachers see different ways to approach lessons that have traditionally been taught in a very teacher-centered classroom.

## New Ways to Incorporate Technology into the Classroom

In talking with teachers regarding the effects of the FBMP on their actual teaching practice, a large percentage of the teachers who were interviewed and who completed the pre and post surveys stated that the program has helped them in numerous ways to find new avenues to use technology in the classroom. Some of the technologies that teachers have reported using in the classroom are the accelerated reader/math programs, the Intel microscope, the Graph Club, Inspiration, Kidspiration, BrainPop and other Websites, Ducane projectors, WebQuests (many of which teachers are now working to produce for themselves), the Smart board, and also wireless laptop carts.

The extent to which teachers' report their abilities have increased as a result of participating in the program can also be seen in the following table.

Overall there were also a number of characteristics that teachers participating in the program cited as key characteristics of the technology training that they have been given during the first year of the FBMP. The vast majority of teachers in the program reported that their work in the program was appropriate to the teacher's varying levels of knowledge, skills, and interests, was consistent with the goals for technology use in the district, was an opportunity for teachers to meaningfully engage with colleagues and materials, and was effective in increasing their ability to appropriately use educational technologies in teaching.

Teachers also cited two main characteristics that they would like to see improved over the next semesters of the program. These two characteristics were that classes were often not spread over multiple sessions, but tended to be one-time experiences, and the activities that were covered were often not focused on for a substantial amount of time. These are both issues that the instructors of the FBM are working to address for the upcoming semesters of the program.

## Conclusion

While the FBMP has had to go through many of the growing pains that often come with a new program, it is continuing to develop to meet the changing needs that teachers have in regards to both technology training and implementing technology-infused lessons within their daily classroom activities. As uncertified teachers work toward their particular subject area credentials, they are also working to develop the skills that will make them into the types of teachers that will be better able to help their students experience many of the technological advancements that may provide them with the skills necessary to compete in an ever-changing marketplace. While the goal is to create a teaching staff grounded in the belief and understanding that technology has the potential to fundamentally change how teachers teach and students learn, the FBMP recognizes the fact that teachers themselves are all moving on their own integration continuum. Some are just starting to become familiar with different technological applications, and others are already manipulating technology and using it effectively to benefit their own subject area lessons. Helping teachers move along this continuum is the overarching goal of the program, and by providing a systematic structure for both training and support, the FBMP is working to revamp the educational process in Brunswick County and ultimately raise the standards of both teachers and students across the County as a whole.

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