ET08

Enhancing Education Through Technology Application
No Child Left Behind Act of 2001 – Title II, Part D
Whitley County School District
Williamsburg, Kentucky

http://www.whitley.k12.ky.us/

Lonnie Anderson, Superintendent

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Executive Summary

Whitley County Middle School (WCMS) has a current enrollment of 697 seventh and eighth grade students. Of these students, 78.67% qualify for free or reduced lunch and over 17% of the students tested in 2006 have an Individualized Educational Plan. WCMS did not meet NCLB Adequate Yearly Progress with their 8th grade Math disabilities population; therefore, the school has been placed in Tier 2 of NCLB Consequence. The Academic Index for math for eighth graders decreased from 68.6 to 63.4. WCMS seventh grade students achieved NCLB Academic Yearly Progress in Reading with the academic index increasing from 93.1206 to 93.6896.

Technology wise the school has a student computer ratio of 3.7 to 1 and a teacher computer ratio of 1:1. All student and teacher workstations are networked and have Internet access. All students, teachers, and staff have e-mail accounts. The school has a networked weather station accessible from all classrooms. The school has 18 SmartBoards, two of which are mounted in existing computer labs. SmartBoards have been purchased for all classrooms in the school and are in the process of being installed. The school has two complete multimedia systems available for use in creating and presenting student activities and movies. Currently two teachers in the building have the knowledge to use these systems. The school has 5 computer labs, two of which are used for computer classes such as word processing and typing. One lab is scheduled for classes to use for core content integration. Software available for student use includes Plato, Riverdeep, Science Holt Earth, Life, Physical Science Tutors and Math Facts. The school recently acquired a Student Response System and iPods. Two of the labs are open for classes to schedule. The major use of the computer labs still tends to be typing portfolio pieces.

WCMS has 45 teachers and 10 instructional assistants on staff. One of these instructional assistants is assigned as a computer lab assistant. The county has one Technology Resource Teacher who is currently assigned to WCMS. The TRT works with WCMS teachers and classes for core content integration.

The computer lab assistant works with students in 1 of the 2 open computer labs. The school has a school technology coordinator who is a full time teacher. This individual is not available during the school day to assist teachers with integration of technology. The school has an STLP program but the students are not only not available to assist teachers but also do not have the knowledge necessary to help teachers integrate technology into the classroom.

The school/district comprehensive plan includes identifying at-risk students by using STAR, CATS, and Early Literacy tests as well as teacher referrals and other assessments. Students identified as at-risk in math/reading are referred for after school tutoring and work with reading coaches. Current classroom observation and teacher and student surveys indicate that technology is still being used to score student level of achievement in reading and math but is not being used as a tool to enhance learning. The Comprehensive District Improvement Plan indicates a need to use technology consistently as a method of skill development and instructional reinforcements. All teachers are not integrating technology into the curriculum. Technology is often used in isolation. Most of our teachers are still using technology primarily for communication and productivity.

Professional development is available on current software programs. The professional development evolves around the knowledge of how to use the software rather than how to incorporate and/or integrate it into the curriculum.

Data sources include CATS assessment results, academic and non-academic curriculum information, district/school assessment data, professional development records, technology surveys and staff information. Based on the data results, the District Technology Committee concluded that teachers need additional training and assistance in using and coordinating technology integration in math and reading to enhance learning in these areas. The proposed approach will continue to focus on professional development to improve instructional practice and instructional leadership.

We have had a TRT in place at WCMS for the past two years. At the beginning of the project, some of the teachers took a hands-off approach to teaching with technology. Initially once the students had their assignments, teachers stepped back and allowed them to work with little involvement on the part of the teacher. Gradually this is changing. More of the teachers are beginning to take on the role of facilitator rather than observer. Teachers are beginning to be more involved with the activity in which the students are engaged and working with individuals and small groups.

Based on increased use of computer labs, classroom observations, teacher and student surveys we have tremendous improvement in the use of technology integration in instruction. While we have made strides, we still have areas that need to show improvement. Student surveys of 7th and 8th grade students in January 2007 indicate that 68% of students have learned to format documents using a word processor; 35% have not learned how to use a spreadsheet to analyze data and only 26% of students use a computer daily in school. Student surveys of 6th grade students in January 2007 indicate that 58% of students have learned to format documents using a word processor; 79% have not learned how to use a spreadsheet to analyze data and 28% of students use a computer daily in school. The Kentucky Program of Studies identifies grades

6, 7, and 8 as middle level students, and our sixth grade students are housed at six different elementary schools within our system. This distribution makes it difficult to ensure that all middle school populations including disabilities populations are receiving individualized instruction. Communication technologies are available to create flexible teaching methods and curriculum materials that can reach diverse learners. For example, technology allows a shift from printed text to electronic text which can be modified to fit text styles and font sizes can be modified as needed by readers with visual disabilities. Electronic text is being used at the 7th and 8th grade levels to allow alternative formats for reading materials that is customized to match student's needs or read aloud by a computer-based text-to-speech translators and integrated with illustrations, videos, and audio. The District Technology Committee proposes that we maintain the existing TRT position at the middle school level and add a second TRT to target 6th grade middle students who are housed at elementary schools in order to assist teachers in providing technology integration content activities.

Progress in student achievement will be measured at the end of the first year as well as the second year. Students will be given a pretest at the beginning of school and a post test at the end of the year. Our goal is two fold (1) to meet or exceed NCLB Adequate Yearly Progress by improving student achievement through the use of technology and (2) effectively integrate technology into instructional use.

Implementation of Plan/Project Design

According to the District Technology Plan/School Improvement Plan, there is a need to increase teacher proficiency and provide teachers with daily support and training through collaboration, modeling and professional development to increase the incorporation of technology into the curriculum.

District and school leadership in technology, curriculum and instruction as well as assessment were actively involved in developing this plan and will continue to provide assistance and support to the school as the plan is implemented. WCMS has added staff and programs funded through other sources that coordinate with the objectives of this plan. For example, a reading specialist and a math specialist have been added to the existing staff. The main responsibility of the reading specialist is to work with students with low achievement in reading. WCMS has recently added the GRADE assessment program for use with this population of students. This diagnostic software evaluates the reading level and areas of weakness for the students and offers a library of resource activities. The Accelerated Math Program from Renaissance Learning is being used with math students. The program is used to diagnose the mathematical concepts and areas that students need to work on. The math specialist and a few of the other mathematics teachers are using the program but training and assistance is needed for the other mathematics teachers before all students can receive the benefit of the program. The math specialist works not only with students with disabilities, but also high achievers by teaching an Algebra I class for high school credit. She works with the staff, initiates special projects for the school, offers assistance in class, and models lessons in many classrooms. She helps the teachers incorporate the use of manipulatives into the mathematics classroom.

KETS matching, local funds and Universal Service Funds (USF) are being used to support technology instruction in the classroom. USF/local funds are being used to give students and teachers access to the most recent technological hardware and software. Every classroom has networked access to the Internet. District and school technology support staff are responsible for overseeing network and computer operations at schools. The Wide Area Network has been upgraded to fiber connection to improve access speed to networked program.

The District Hub link to KDE has been upgraded to 100 meg. Title II, Part D funds are being used to purchase appropriate instructional software for students taking in consideration students with disabilities and those identified as needing assistance. Implementation of this plan is expected to reduce the difference in scores between regular and special needs students as well as increase the percentage of teachers and administrators who effectively integrate technology into the classroom and tasks they perform on a daily basis. Presently, there are no private schools operating in this community.

Technology rich environment

What can a student using technology accomplish in such an environment?

Students will demonstrate competencies in technology literacy. Students will use computers and other kinds of technology to not only collect, organize, and communicate information and ideas but also to interpret and explain relationships between tables, graphs, verbal rules and equations.

Students use word processing, database, spreadsheet, browser, presentation and other tools. Students know the purpose and function of technology to enable them to select the appropriate tools to create original innovative work. By the end of middle school, students apply and demonstrate technology competencies across all curriculum areas.

Professional Development

Whether technology should be used in schools is no longer the issue in education. Instead, the current emphasis is ensuring that technology is used effectively to create new opportunities for learning and to promote student achievement. Educational technology is not transformative on its own.

According to North Central Regional Educational Laboratory, a successful program requires the assistance of educators who integrate technology into the curriculum, align it with student learning goals, and use it for engaged learning projects. Professional development for teachers becomes the key issue in using technology to improve the quality of learning in the classroom. (http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te1000.htm)

Our long-range technology strategy includes providing students, teachers, and administrators with the best technology available to increase learning and complete educational tasks. The KETS Master Plan has been consistently followed in developing this technology strategy. Our successes include but are not limited to:

- ✓ Wide Area Network connected via fiber
- ✓ Telecommunications access for each classroom for improved communication among teachers, parents, and students
- ✓ E-mail accounts for all students, staff and teachers in the district.
- ✓ Use of computers for special education management
- ✓ Use of computers for attendance and grade cards
- ✓ Piloting on-line MAP (Measure of Academic Progress) testing for three schools

This technology needs to be not only available but also reliable. Part of our technology strategy is to provide technical assistance to schools through district personnel. A local school technology coordinator communicates problems to the district staff, and the district technology staff strives to complete work requests as soon as possible to assure students, teachers, and administrators of working equipment. Available, working equipment does not profit the students, teachers, and administrators if they do not know *how to operate the equipment and how*

to integrate its use into the curriculum and daily tasks. With this plan, we are putting in place personnel and professional development to meet this need.

According to Center for Applied Special Technology (CAST) (1996) researchers, using technology can enable development of critical thinking when students are actively involved in using technology to present, publish and share documents. Using technology to build thinking skills is also effective in raising scores of disadvantaged students on reading and math test. Disadvantaged student in Grades 4-7 achieved twice the national average gains on reading and math tests when using a combination of electronic information and communication resources to support the development of higher-order thinking skills. (Coley et al., 1997: Pogrow, 1996)

We want to give our students these opportunities to improve reading and math comprehension through the use of technology. To do this we feel we need to focus on professional development aimed at improving instructional practice and instructional leadership in technology integration. In order to bring about student improvement, our plan will focus on providing teachers with the necessary training and assistance to:

- ✓ Use technology at high levels
- ✓ Understand the software available including how to use it, when to use it, and what students would benefit most by its use
- ✓ Professional development that emphasizes technology integration in math and reading classrooms
- ✓ Assist teachers in allowing student participation to move from passive to active involvement

Our Professional Development is aligned with Kentucky Department of Education/Kentucky Board of Education goals and priorities. We propose to use the Progressive Development Direct

(PD Direct) method for professional development for teachers. We feel this method will be the most successful for raising the level of teacher technology competency and removing barriers to learning by developing teacher self confidence and leadership in planning and managing technology integration in the classroom. We want teachers to not only learn the basics but also feel competent and comfortable enough to discover new ways to use technology in their daily tasks.

A technology resource teacher (TRT) will continue to be employed on a full-time basis to provide coaching, mentoring, modeling, and demonstration. She will assist in analysis of student work and assist the teachers as they begin self directed learning. Because our 6th graders are housed in six different elementary schools throughout the county, we plan to employ a second TRT to work with these 6th grade teachers and students. The TRTs will work with each other and classroom teachers as needed providing technology assistance in the classroom as well as consulting with teachers on curriculum integration. The TRTs will provide professional development to teachers and administrators on basic technology skills such as using Microsoft Word, Microsoft Excel, Microsoft FrontPage and other software programs. Professional Development will also be provided on technology integration and implementation in the classroom and office. The TRTs will complete how-to hand-outs for teachers and administrators as well as provide ideas for use. The TRTs will be available during school hours as well as during professional development times set up after school. The TRTs will be certified teachers with high levels of technology skills.

WCMS has added a reading & math specialist funded through other sources that coordinate with the objectives of this plan. These two specialists work closely with the TRT to enhance instruction through technology integration in the reading and mathematics classrooms.

Specific responsibilities for the TRT (see attached job description) will include:

- ✓ Develop model curriculum units and work with teachers to implement units
- ✓ Develop, identify, coordinate and conduct professional development in areas of technology integration in math and reading
- ✓ Set up software for teacher use
- ✓ Run reports from the software for teachers to use in determining student progress
- ✓ Assist teachers in using web-based content tool and resources
- ✓ Assist teachers in building web pages for increased communication with and involvement of parents
- ✓ Assist in identification of appropriate instructional software for students
- ✓ Model Kentucky's technology standard for teachers
- ✓ Assist teachers with NETS student technology standards
- ✓ Identify and develop effective professional development programs for teachers
- ✓ Assist teachers in use of online learning using videoconference capabilities and the Internet
- ✓ Assist teachers in using the Internet as an instructional tool
- ✓ Assist teachers creating appropriate web quests
- ✓ Assist teachers in developing projects and sharing them online with colleagues

Currently Whitley County Middle School has the PLATO computer software package containing all the high school courses such as biology, algebra, chemistry, etc. This software was purchased with KETS matching funds. The majority of the components of this program have proven to be too advanced for the special needs population. Elementary Beginning Reading and Math Expeditions were added to the PLATO curriculum in the 2006 - 2007 school

year at WCMS in order to further provide a learner centered environment. PLATO software will be used for computer assisted instruction focused on math and reading skills. Use of this software will allow individualized learning and permit the student to proceed at his/her own pace. Teachers need training on how to effectively use this program to enhance students' reading and math skills. The TRT will provide this training as well as set up the software for teacher and student use.

Collaborative activities and formative feedback are a vital part of instructional strategies that will be used in effective technology implementation. Leadership is also central in aligning technology resources with school improvement goals. Research done by According to Research Windows published by Center for Applied Research in Educational Technology (CARET) (May, 2002) indicates a need for understanding the combined efforts necessary for technology to positively influence students' academic performance. School leadership at Whitley County Middle School is very supportive of the role of technology in education.

School leaders, TRT, technology staff and district leaders will work to promote equity in participation among students, parents, and teachers. We will provide and support the individual learning needs of students and to involve the parents of the children in supporting student learning.

Evaluation

The project will be a 2-year program. Teacher lesson plans, surveys, and classroom observation will be used to monitor improvements in technology integration in the classroom. Lesson plans should show that each teacher has incorporated technology into their lessons on some level at least once a month. This technology use should not be for the sake of using technology but for the benefit of the students and to enhance the learning experience. The

percentage of teachers using technology equipment such as smart boards and projectors will increase each year by 5%. Our goal is for 75% of the teachers to be utilizing technology equipment by the end of the second year. Teacher surveys will be completed at the end of each year. Teacher surveys should indicate a decline in the teachers who feel they need assistance in identifying appropriate instructional software, developing specific lesson plans which utilize technology, or individualizing instruction for students. Our ultimate goal is to have the teachers comfortable with using technology.

Progress in student achievement will be measured at the end of the first year as well as the second year. An on-going requirement continues to be the need a curriculum knowledgeable person with the ability to have the software ready for teachers and classes in order to utilize computer lab software as well as run student reports. We expect the Academic Index for reading and math to increase per year by 3%. Our goal is to meet or exceed NCLB Adequate Yearly Progress. Student progress will also be measured from the STAR Reading and STAR Math tests which are given at the end of each semester.

Web pages for collecting and sharing lessons will be implemented at WCMS. Teachers with the help of the TRT will produce web pages highlighting the successful technology integration products.

The ultimate goal of evaluation is to determine whether professional development promotes using technology to improve student achievement.

Performance Goal 1: Student achievement, including technology literacy, of all students is improved through the use of technology.

Currently we do not have a procedure that accurately accesses the technology literacy of students in our school system as defined in the Kentucky Program of Studies. (http://www.education.ky.gov/KDE/Instructional+Resources/Technology/Student+Initiatives/Stu

dent+Technology+Standards/) At the beginning of the 2007-2008 school year, we will pretest to determine the number of students who meet or exceed the state standards for student literacy in technology in grade 8. The results of this test will be used as the baseline to determine what we need to teach. Beginning in 2007-2008 we will pretest and post test students using Technology Literacy and Assessment. This testing program, aligned to International Society for Technology in Education National Educational Technology Standards will provide us with current student technology abilities. The results will allow us to customize instruction to meet classroom goals and student needs. We will align technology instruction with content area standards.

We will use on-line delivery which means students, educators, and parents can access test results from any Internet-connected computer allowing us to build links between school and home. Individual student reports will help teachers with planning how to better integrate technology in instruction. Although we cannot establish the baseline prior to August 2007, we expect our students to show a minimum of 6% increase from the fall of 2007 to spring 2008. We will review this section to see if we need to make adjustments as soon as we have the testing results in August.

Performance Goal 2: Teachers effectively use technology and research-based instructional practices to support student learning.

The percentage of teachers who are qualified to use technology for instruction will increase from the baseline of 66% in 2006-2007 to 75% in 2007-2008.

All teachers are expected to demonstrate implementation of technology as defined in Standard Nine of Kentucky's New Teacher Standards and Standard Ten of Kentucky's Experienced Teacher Standards.

All teachers were invited to participate in a county wide survey in March 2007. Survey areas included (1) E-mail use, web page design and Internet use (2) integration of Internet

resources in instruction (3) integration of technology enhanced instruction in teaching, learning curriculum.

Of the respondents, 36% of teachers feel they need additional help in integrating Internet resources in instruction and 34% of teachers feel they need additional help in effectively using technology and research-based instructional practices to support student learning.

Evidence of teacher integration will be provided by the following supporting evidence: principal walkthroughs and evaluations, lesson plans/units of study, perception surveys, district technology plans, school council policy and samples of student work and products.

Teacher's surveys are collected annually using Profiler to determine areas of improvement and technology need areas. District technology committee meets a minimum of three times annually to review and evaluate technology integration within the schools and make necessary adjustments to plans. Each school holds an annual technology fair with the winners at each grade level advancing to district competition. As part of the competition student work must be displayed prior to district competition.

Whitley County's District Technology plan may be viewed on the district's web page by clicking on the following link: 2007-2008 District Technology Plan at http://www.whitley.k12.ky.us/consolidated_plan.htm

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KENTUCKY DEPARTMENT OF EDUCATION
Enhancing Education Through Technology
Competitive Application

District	**Whitley County**	**Eligible Amount**	**$45,000**
Contact	**Lonnie Anderson**	**Title**	**Superintendent**
Address	**300 Main Street** **Williamsburg, KY 40769**		
Phone	**606-549-7000**		
Email			
Project Coordinator	**Thelma Jones**	**Title**	**District Technology Coordinator**
Address	**300 Main Street** **Williamsburg, KY 40769**		
Phone	**606-549-7000 x2036**		
Email	**thelma.jones@whitley.kyschools.us**		

I swear under oath, subject to penalty for perjury, that I am authorized to execute this document and assure that the attached application has been reviewed and approved for implementation by all stakeholders and the district will comply with all requirements, both technical and programmatic, pertaining to the Enhancing Education Through Technology grant. Failure to do so could impact future funding.

_____ _____

Superintendent Signature Date

_____ _____

Notary Public My commission expires

Notary Seal **(KDE requires that the original of this document has a Notary Seal)**

ENHANCING EDUCATION THROUGH TECHNOLOGY
COMPETITIVE GRANT
WHITLEY COUNTY SCHOOL DISTRICT

BUDGET SUMMARY FORM

MUNIS CODE	Description	4257 Year One (7/01/07-9/30/08)	Year One Match (source & amount)	4258 Year Two (7/01/08-9/30/09) Contingent of Fund Availability	Year Two Match (source & amount)
0110	Salary (1.5 positions)	$45,000	$16,238	$45,000	$16,238
0211-0297	Fringe Benefits		$13,250 (Local)		$13,250 (Local)
	Professional Development/Technology Integration Specialist Meetings (local, regional, trainings and/or conferences)	Grant funds cannot be used	$4,400 (Local/PD)	Grant funds cannot be used	$4,400 (Loca/PD)
	Hardware/software	Grant funds cannot be used	$2,000 (KETS)	Grant funds cannot be used	$2,000 (KETS)
	Travel (monthly meetings, conference, etc.)	Grant funds cannot be used	$600 (Local)	Grant funds cannot be used	$600 (Local)
	Technology Student Literacy & Assessment	Grant funds cannot be used	$3,500 (Local & KETS)	Grant funds cannot be used	$3,500 (Local & KETS)
	Total Direct Costs				
0933	Indirect Cost (based on district's restricted indirect cost rate)				
	BUDGET TOTAL	$45,000	$39,988	$45,000	$39,988

*Additional line items may be added (Travel, Registration, Stipends, etc) to reflect support of the program. These items cannot be funded with the grant funds.

Budget

The types of cost that are being requested to implant this plan are primarily salary and professional development. The total amount requested for each year is $45,000 or 1.5 teaching positions. The grant amount of $30,000 for one full time teacher and $15,000 is not sufficient to pay the entire cost of a certified teacher. The beginning salary for a certified teacher with Rank III is $30,170 for the 2006-2007 school year. We have allowed for salary increase and figured in fringe benefits of $29,488 to be paid locally. We are allocating $4,400 in local professional development funds to allow Technology Integration Specialist to attend regional, state trainings and conferences.

KETS and local funds will be used to fund Technology Student Literacy & Assessment to ensure that we have a method of evaluating technology progress for students. We have sufficient hardware/software in place for the existing Technology Integration Specialist. We are allocating $2,000 in KETS money to pay for any necessary hardware/software for the half-time position. We are also allocating $600 in local funds to reimburse local travel from one school to another.