

# **Educational Technology Plan for Warren County JVSD - 051474**

**School Years:**

**2009-10**

**2010-11**

**2011-12**

**Status: Draft Started**

*\*created using the eTech Ohio online Technology Planning Tool version 3.0 (TPTv3)*

## **TABLE OF CONTENTS**

### **Pre-Planning**

- 1.0 Establish Technology Planning Committee
- 1.1 Overview of TPT v3 Planning Framework
- 1.2 Review Current Technology Plan
- 1.3 Vision/Mission

### **Curriculum Alignment & Instructional Integration**

- 2.1 How Are You Making Ohio's Technology Standards An Official Part Of Your District's Curriculum?
- 2.2 How Will You Be Using Technology to Improve Teaching and Learning in English/Language Arts?
- 2.3 How Will You Be Using Technology to Improve Teaching and Learning in Fine Arts?
- 2.4 How Will You Be Using Technology to Improve Teaching and Learning in Foreign Language?
- 2.5 How Will You Be Using Technology To Improve Teaching and Learning In Mathematics?
- 2.6 How Will You Be Using Technology to Improve Teaching and Learning in Science?
- 2.7 How Will You Be Using Technology to Improve Teaching and Learning in Social Studies?
- 2.8 How Are You Teaching Students About Technology Itself?

### **Technology Policy, Leadership and Administration**

- 3.1 Analyzing District Education Technology Policies
- 3.2 Analyzing District Leadership
- 3.3 Technology Leader/Coordinator Time Commitments

### **Technology Infrastructure, Management and Support**

- 4.1 Networking, Internet & Telecommunications
- 4.2 Access to Technology
- 4.3 Stakeholder Access to Educational Information & Applications
- 4.4 Educational Software
- 4.5 Security
- 4.6 Technology Support and Management
- 4.7 Total Cost of Ownership

### **Budget and Planning**

- 5.0 Budget

### **Appendix A - Additional Documents**

## Pre-Planning

### 1.0 Establish Technology Planning Committee

Curriculum Coordinator  
 Instructional Integrationist  
 Library/Media Specialist  
 Principal  
 Superintendent  
 Teacher  
 Technology Coordinator  
 Technology Support

Approvers:

Margaret Hess (Superintendent)  
 Karen Royer (Treasurer)  
 David Cairns (Technology Coordinator/Director)

### 1.1 Overview of TPT v3 Planning Framework

eTech Ohio's Technology Planning Tool version v 3.0, strategically addresses technology planning in an educational organization and provides guidance in implementing technology to increase student achievement. Within this technology plan you will find the educational organization's vision and mission statements as well as a plan for the following: ODE Academic Content Standards (ACS) alignment with the ODE Technology ACS, technology integration into the curriculum, technology policy, technology leadership and administration, infrastructure and networking, and budgeting.

The technology planning framework addresses 5 questions adapted from "Asking the Right Questions: Techniques for Collaboration and School Change" by Edie Holcomb. In each phase of the plan, narrative responses describe the educational organization's technology planning in the following manner:

**"Where are we now?"** addresses ASSESSMENT of current status within the educational organization

**"Where do we want to go?"** addresses GOALS for growth in various areas

**"How will we get there?"** addresses PROFESSIONAL DEVELOPMENT necessary to achieve goals

**"How will we know we're getting there?"** addresses the EVALUATION PROCESS that enables the educational organization to MONITOR PROGRESS toward the specified goals.

**"How do we sustain the momentum?"** Addresses ORGANIZATIONAL SUPPORT, EVALUATION and REVISION processes to achieve the goals

As Ohio endeavors to build more agile and effective school improvement plans, this technology plan will be an instrumental tool in fostering quality planning and managing technological changes that will impact the communities where we live.

### 1.2 Review Current Technology Plan

To what goals and strategies does your current plan commit to advance the use of technology to enhance teaching and learning?

Are any of these goals no longer relevant?

What goals and strategies were met, and to what degree of success?

Goals:

1. To provide quality academic and career/technical education
2. To improve recognition of WCCC
3. To provide hardware/software upgrades and training for staff
4. To provide equipment necessary for current and future curricular needs
5. To provide a safe environment for students and staff
6. To provide security and protection for data and network use
7. To increase staff productivity
8. To increase student achievement
9. To provide integration of video, voice, and data
10. To provide tools to assist students and staff in achieving professional and personal goals

Our goals are current, relevant, and support the vision and mission of this technology plan. We have successfully

reduced the average age of our equipment and implemented a technology training program for staff. We continue to make improvements in our infrastructure that support energy conservation, fiscal responsibility, and provide a safe comprehensive learning environment for our students. Our efforts are young in age with restructuring beginning in 2006 and our success rate continues to grow. Staff development in technology use and integration (goals 3,7,10) and data protection/security (goals 5,6,9) are the core of our focus. We consider our progress in both of these areas to be at 25% of where we want to be or at the beginning stages of implementation.

Please address the following as you plan for the next three years. Be sure to record your conclusions for reflection.

Were there any unexpected outcomes or new needs that emerged?

Which goals and strategies still need to be addressed? How will the technology committee address them?

Growth is a continuous factor, and with it, expense. Our network infrastructure cleanup is complete, however, advances in technology have changed our minimum standard for networking equipment as we future proof to the migration toward 10 gbps core bandwidth and 1 gbps bandwidth to the desktop. In planning for the next three years, all new switches will be able to uplink at 10 gbps by installing a new sfp module, all computers will have a 1 gbps network card, all fiber installed will be 50 micron capable of 10 gbps, and all copper installed will be capable of 1 gbps.

Changes in public records law has prompted the research, purchase, creation of policy, and implementation of an email archiving system. Policy is still be written and implementation has not yet begun. WCCC will have a five year retention policy and the new system will impact us over the next three years.

The need to solidify backup procedures and network storage prompted the need to move into a SAN and the purchase of an enterprise backup solution. This purchase has freed the Technology department to:

1. Create high speed, high availability network drives for staff and students
2. Ensure the safety and integrity of network data stores with longer retention of backup data
3. Begin the migration process to virtualized server machines using VMWare ESXi (free version) which centralizes backup routines, saves energy, and provides high availability of all services.

Our implementation of Sharepoint Services 3.0 for the WCCC intranet has been very successful, but has also brought about new uses for both teachers and students as they learn about and integrate Web 2.0 technology into the learning process. This effort continues to grow and will be threaded in our planning over the next three years.

Our implementation of interactive whiteboards has been hugely successful and instructor use and collaboration continues to grow and strengthen with this tool.

Our greatest challenge remains staff training, in particular, finding a way to reach all staff members. With an aging staff, sparking interest in new ideas and new technologies is a serious challenge.

All of these efforts are new and are in various stages of implementation. The technology committee plans, researches, and ensures that all new technologies support the mission, vision, and goals of this technology plan.

## 1.3 Vision/Mission

### A. Vision

Vision Statement:

Our technology will be state-of-the-art, user-friendly, and enhance all operations of the district by allowing us to:

- Provide quality academic and career/technical education that is aligned with state and industry standards for all students
- Create future opportunities unique to each learner.
- Compete in a world/global market
- Ensure that we are the partner of choice within the educational and economic systems of our community and state

### B. Mission

Mission Statement:

Our technology plan will provide continuous guidance and direction in the purchase, allocation and use of technology for the purpose of improving instruction and overall student achievement for the district.

## Curriculum Alignment & Instructional Integration

### 2.1 How Are You Making Ohio's Technology Standards An Official Part Of Your District's Curriculum?

This section is a prerequisite for Sections 2.2 through 2.8 and should be considered as a separate task with a different goal. The goal of this section is to describe how your district is including Ohio Technology Standards into the district's curriculum. Regardless whether your district calls it a "Graded Course of Study," "Curriculum Map," or something else – all districts have some form of documentation that spells out what is expected to be taught. The content standards for technology should be written into these documents so they are interwoven with the content standards for math, science etc. For Educational Service Centers (ESCs), please identify how you are assisting your contracted schools in aligning their curriculum to technology standards.

The academic content standards, known as curriculum, describe what to teach. Technology standards should be embedded within the content from other disciplines in order to deliver the curriculum in a highly effective and motivational way.

- Using the grid below, please indicate the status of your district's efforts to embed Ohio's Technology Standards into the content standards for each curricular area. In the left column, "Where Are We Now?," please select "Not Started," "In Progress," or "Complete" for each curriculum area listed. In the right column, "Where Do We Want To Go?" please select the school year you completed or plan to complete this process.

	Where are we now?	Where do we want to go?
English Language Arts	In Progress	2011-12
Fine Arts	N/A	2006-07
Foreign Language	N/A	2006-07
Mathematics	In Progress	2011-12
Science	In Progress	2011-12
Social Studies	In Progress	2011-12
Technology (specific course)	Complete	2007-08
Other Content Areas	In Progress	2011-12

- In the textboxes below, please provide brief but comprehensive descriptions of how you are writing Ohio's Technology Standards into all of your curriculum areas. How are you measuring progress toward that goal, and how will you sustain a culture of technology integration into the future?

#### How will we get there?

WCCC is committed to aligning curriculum development with the benchmarks, indicators, and grade-band correlation of the ACS. WCCC is committed to a strong Advisory Committee program which receives input from area business leaders and colleagues from other secondary and post-secondary education institutions regarding technology and curriculum. Recommendations from the Advisory Committees are documented, researched, and considered for curriculum alignment. Each career-technical curriculum document requires the signatures of their respective Advisory Committee members prior to approval. The Advisory Committee program keeps WCCC career-technical programs up to date with trends, applications, and hardware requirements in technology.

WCCC is proactive in investigating technology trends and best practices in business and in other education institutions. WCCC is committed to providing staff with professional development opportunities to ensure successful implementation of new technology. Professional development may be initiated by the Administration or the staff member. Tuition reimbursement money is available to staff desiring to take a class in technology.

The Technology Department has developed a voluntary professional development program in technology for staff with prior approval from the LPDC Committee to offer CEU credit toward certification renewal. Training includes but is not limited to: Smart Boards, Senteo Interactive Student Response System, Office 2007, Sharepoint Service 3.0, Web 2.0, Creating Effective Presentations, Enhancing Presentations with Multimedia, and Adobe Photoshop. The Technology Department determines offerings for this program based on input from staff surveys issued during spring of each school year.

Currently, cross-curricular activities are not written into WCCC curriculum, but rather, left to individual instructors. Project work, such as the senior capstone, is typically initiated by the career/technical program instructor and captured and enhanced by the English, mathematics, science, and social studies instructors. There are varying degrees of project work initiated by the career-technical instructors and varying degrees cross-curricular integration between ACS standard areas. WCCC is in the process of adopting an academy structure as defined by the Ohio Department of Education which groups similar career-technical programs into an academy and dedicates ACS area instructors to each academy. The academy structure facilitates cross-curricular activities with technology integration between each ACS area and the career-technical programs. In 2007, this initiative began with a Construction Trades Academy. Plans for building renovations will greatly impact the logistical development of academies. The major drawback to the academy structure is the potential requirement for additional staffing resulting from smaller academic class sizes.

All curricula for WCCC programs and academic content courses undergoes a five year review and revision cycle. Curriculum review will include all of the above mentioned data and will ensure that the Technology ACS is aligned with curriculum with focus and sustained momentum.

#### **How will we know we're getting there?**

Data will be gathered to track the development and the implementation of ACS standards and curriculum alignment at WCCC. The WCCC lesson plan template incorporates checkpoints under the headings of Instructional Procedures and Materials/Resources Required which indicate how technology is used in instruction.

During the annual review of the local Technology Plan, the Technology Committee holds roundtable sessions with each academic content area. For Career Technical Programs, this is done in the academy structure model, although only one formal academy exists today. The technology committee review and receives input from these roundtable sessions regarding technology equipment, software, use of technology in the classroom, and next steps required to advance the ACS content area with technology integration. This data is then incorporated into the local Technology Plan and used for making decisions in technology purchasing. In addition to providing the Technology Committee with valuable data, these roundtable sessions get staff members thinking about technology integration and use and foster collaboration within academies and academic departments.

The WCCC Administration uses Advisory Committee documentation, teaching staff evaluation reports, and survey data to assist in decision making for purchasing technology. The Director of Secondary Education and the Curriculum Director collaborate with the Technology Coordinator to determine needs and allocations which promote strengthening technology integration into curriculum.

All professional development activities include an evaluation process which will include a section for staff to indicate how they will include the concepts learned in their instructional planning. All data gathered for each ACS area will be examined by the Technology Committee for future planning.

Finally, the curriculum review process itself forces staff to collaborate and work together to determine the level of technology integration and the direction the department or program will go over the next five years with regard to technology tools, equipment, resources, and curricular material.

#### **How will we sustain focus and momentum?**

In each content area, including Career Technical Programs, we will gauge our success through the analysis of above-mentioned data as well as data collected by external assessments such as OGT and technology site visits by High Schools that Work. Student progress may be tracked through online textbook software or curriculum materials in addition to standard assessments. This type of software provides real-time feedback of competencies that students have learned and weak areas which should be focused on. Problem areas and/or standards are identified and action plans developed and implemented. Lesson plans are reviewed to ensure alignment with the academic content standards.

To enhance and sustain our momentum in the ACS areas, we will work hard to improve equitable access to computer labs and enhance our Media Center's ability to support a wide variety of resources both printed and online. With our planning and purchasing system, we are guaranteed to check that all technology purchases are aligned to curriculum.

Teacher monitored reactions by students to technology will allow them to adapt the technology to best fit our

student's learning needs. Software updates and training will ensure maximum effective use of technology for student achievement. Professional development resources may provide training on the latest software/programs that introduce new or innovative delivery methods. District-wide professional development includes the comprehensive technology professional development program so that teachers can implement best practices and integrate new technologies.

The continuous improvement process will focus on weak areas of the curriculum and instruction. Best practices from IMS and the Ohio Resource Center will be utilized to improve instruction. Teachers are working on differentiated instruction that requires the use technology to share and gather information on lessons. Technology allows teachers to map the curriculum and sort for gaps and redundancies.

Evaluation strategies will include but are not limited to results of OGT testing, results of HSTW assessments, teacher and student surveys and WCCC Exams. Results from these assessments will be analyzed and improvement strategies will be implemented that target each ACS area.

## 2.2 How Will You Be Using Technology to Improve Teaching and Learning in English/Language Arts?

The goal of section 2.2 is to identify the major elements of your district's plans to use technology to enhance teaching and learning in English/Language Arts at the elementary, middle and secondary levels over the next three years.

The primary objective is that you provide a brief description of two or three broad-based practices being utilized by the majority of your district's teachers to use technology to improve teaching and learning at the elementary, middle and secondary levels. For example, if all or most of your fifth through seventh grade English/Language Arts teachers are requiring students to conduct internet research or produce multimedia presentations on a regular basis; this would qualify as a broad-based practice. But if only a fraction of your teachers are regularly using these tools in the classroom – do not portray it as a broad-based practice.

Please feel free to include information about significant technology integration practices which are, by nature, not broad-based. For example, if a high school science teacher is using simulation software to allow students to conduct virtual experiments which are too dangerous to replicate in the classroom or lab; please indicate this in the Science curriculum area at the high school level only.

Using the ACOT Scale and the grid below, indicate your school's current level of effective technology integration in the English/Language Arts instructional process, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

### Current Levels of Technology Integration in English/Language Arts

**1.0 Entry** - Learn the basics of using new technology.

**2.0 Adoption** - Use new technology to support traditional instruction.

**3.0 Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.

**4.0 Appropriation** - Focus on cooperative, project-based, and interdisciplinary work, incorporating technology as needed.

**5.0 Invention** - Discover new uses for technology tools. Develop spreadsheet macros for teaching algebra for example, or design projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	N/A	N/A
K-2	N/A	N/A
3-4	N/A	N/A
5-7	N/A	N/A
8-10	N/A	N/A
11-12	2.0	3.0

### How will we get there?

WCCC has made efforts to reduce an unbalance in the amount of technology used in the English department per classroom and per teacher. Each classroom has a minimum of three computers with Internet and print

capability. Larger classrooms have five computers. Two of the six classrooms have interactive Smartboards. While teaching under a common curriculum, the English Department does not utilize a common methodology nor do they give common assessments. Computer/Network technology in these classrooms can be used for enrichment, research, writing projects, and reading assignments all of which is fully aligned with the curriculum. The private student computer desktop is accessible from any computer in our facility along with network storage. WCCC is investigating the use of Microsoft Live@edu for 2009-10.

All English/Language Arts Instructors are responsible for student Career Passports. Students use online development tools from InfoOhio, OCIS, and Kuder. Students create a portfolio including a career narrative, resume, letters of recommendation, and other documents. The majority of the English Department instructors sign up for public computer lab use in order to complete this research and writing project.

The English Department uses a mix of online and printed text books. Students with Internet access at home can access the online text books from home while others must seek public Internet venues. There is at minimum a classroom set of text books for use during the school day.

All students in English classes utilize the Internet for research and Microsoft Office 2007 for word processing and creation of presentations. Multimedia technology such as DVD and VHS is used to enrich their curriculum.

WCCC desires the English department to train in and adopt use of Web 2.0 technology or interactive Internet use with students. Training is being offered during the 2008-09 school year on Sharepoint Services 3.0 and on Web 2.0 for instruction. Students are actively engaged in Web 2.0 social networking in their personal lives. WCCC recognizes the current trend and movement in education to tap into the way students prefer to communicate and turn it into a positive learning tool and environment for all students. Digital Storytelling, podcasting, wiki development, and online journaling through blogs are all encouraged.

Professional development is offered by the Technology Department with the Technology Coordinator planning and coordinating instruction in workshop format. As it is difficult to bring the entire department into one session, a train the trainer approach is encouraged. Documentation of participation goes directly to the LPDC committee and workshop evaluations go directly to the Technology Coordinator.

#### Goals:

1. Increased use of high quality Multimedia Technology including abandonment of VHS for DVD, Intranet, and Internet Streams
2. Common Methodology which includes the use of smartboards, group projects, student response systems, and common assessments
3. Increased integration of Web 2.0 technology into the English curriculum and methodology including digital storytelling, blogging, journaling, and wiki group projects
4. Increased Academic integration into the Career Technical programs fostered by a true Academy model for the district. This goal would include group and individual projects that span all ACS areas and the student's Career Technical program of study.

#### **How will we know we're getting there?**

Several members of the English Department are in stage 4 of development while others hold the department back to an adoption state. While slow to change, we continue to encourage and attempt to influence all instructors in the department.

Several more members of the English Department desire Smartboards and projectors for their classroom. Interest has been expressed for a portable wireless laptop cart to share between classrooms. In fall of 2009, two new English classrooms will be completed for use and will each have a Smartboard, teacher computer, five student computers, network printing, and wireless access. In the fall of 2008, each English Department teacher received a new computer capable of driving a smartboard and multimedia functions.

The English Department is under consideration for adoption of new technology prior to their next curriculum review in 2010-11. It is desired to make student access to technology within this department more equitable at that time and tie that access directly into the revised curriculum document. As curriculum is upgraded, technology incorporation into curriculum will promote higher learning practices.

The Curriculum Director and Principal are responsible for examining planning and methodology by the

teachers. The evaluation process monitors and makes recommendations on the effectiveness and use of technology in the teaching methodology. It is the role of the Technology Coordinator to ensure that all instructors have opportunities for professional development and access to technology needed to support the curriculum and the goals in this document.

The technology committee holds departmental roundtable sessions with each department twice per year. The first session is a review of this document and the goals contained therein. This sparks the document revision process and gets the department thinking and planning their purchase requests for the next fiscal year. The second roundtable covers the technology purchasing process focused on curricular integration and common methodology within the department.

Student progress with the use of technology in the English department is measured by OGT test scores, Academic evaluations through High Schools that Work, and Classroom level assessments. Both students and staff are given surveys from which data is used to measure effective use and access to technology for all departments.

Informal measures include the quantity/frequency of technology and media items checked out from the media center and Web 2.0 content generated.

We will know we have met our goals when our students are doing project work that includes English, Science, Social Studies, Mathematics, and their Career Technical Program. We will know we have met our goals when all English teachers have smartboards, a minimum of one set of student response clickers, and each have five student computers in their classroom that are used daily. We will also know our goals have been met when every student in every English class is generating educationally oriented web 2.0 content both at school and off-campus. We will also know we have met our goal when a student taking English from any teacher in the department receives the same methodology and access to technology as every other student. The ultimate gage would be to see our science classes interacting with other English classes world-wide.

#### **How will we sustain focus and momentum?**

As stated above, it is the responsibility of the Technology Committee to examine trends in new and emerging technology and to survey staff to determine professional development desires and needs. It is the responsibility of the Technology Coordinator to lead the committee, stay abreast of trends and emerging technology, and to plan, schedule, and coordinate professional development activities for staff and students use and integration of technology.

The Technology Coordinator attends Ed Tech conferences annually offered by SOITA (Southwest Ohio Instructional Technology Association) and ETech Ohio. The annual Ohio ACTE conference is also attended and provides valuable insight into technology integration into Career Tech programs. Information attained at these conferences is brought back to the Technology Committee for review and discussion. The staff is surveyed every Spring and a Technology Professional Development program is then published and includes summer activities, after school workshops, and weekend classes. All activities are pre-approved by the LPDC committee for CEU credit. Activities are taught by one of the following: SOITA staff, Technology Department Staff, WCCC Adult Education Staff. Courses led by SOITA allow teachers the opportunity to purchase graduate credit from the University of Dayton.

It is our belief that our students know no fear of technology and have technology use ingrained in their daily lives. It is our belief that a well trained staff is the key to sustaining momentum and achieving the goals set forth for our English Department. To this end, the technology committee will continue to engage and encourage staff participation in professional development activities and growth in the use and integration of technology into the curriculum.

## **2.3 How Will You Be Using Technology to Improve Teaching and Learning in Fine Arts?**

The goal of section 2.3 is to identify the major elements of your district's plans to use technology to enhance teaching and learning in Fine Arts at the elementary, middle and secondary levels over the next three years.

The primary objective is that you provide a brief description of two or three broad-based practices being utilized by the majority of your district's teachers to use technology to improve teaching and learning at the elementary, middle and secondary levels. For example, if all or most of your fifth through seventh grade Fine Arts teachers are

requiring students to conduct internet research or produce multimedia presentations on a regular basis; this would qualify as a broad-based practice. But if only a fraction of your teachers are regularly using these tools in the classroom – do not portray it as a broad-based practice.

Please feel free to include information about significant technology integration practices which are, by nature, not broad-based. For example, if a high school science teacher is using simulation software to allow students to conduct virtual experiments which are too dangerous to replicate in the classroom or lab; please indicate this in the Science curriculum area at the high school level only.

Using the ACOT Scale and the grid below, indicate your school's current level of effective technology integration in the Fine Arts instructional process, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

#### Current Levels of Technology Integration in Fine Arts

1.0 **Entry** - Learn the basics of using the new technology.

2.0 **Adoption** - Use new technology to support traditional instruction.

3.0 **Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.

4.0 **Appropriation** - Focus on cooperative, project-based, and interdisciplinary work - incorporating the technology as needed and as one of many tools.

5.0 **Invention** - Discover new uses for technology tools, for example, developing spreadsheet macros for teaching algebra or designing projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	N/A	N/A
K-4	N/A	N/A
5-8	N/A	N/A
9-12	N/A	N/A

#### How will we get there?

WCCC students have the opportunity to take fine arts for credit in grades 7 -12 within their partner school districts and may elect to enter a virtual course offering through the Warren County ECS. The potential of offering fine arts as an elective through a video distance learning cooperative with partner districts or a virtual course offering is currently under investigation. WCCC does offer an elective course in Drama, however, each partner district determines if this course will be counted as fine arts credit or as elective English/Language Arts credit.

For these reasons, WCCC is not involved in a formal fine arts program and this section of the ACS is not applicable.

#### How will we know we're getting there?

N/A

#### How will we sustain focus and momentum?

N/A

## 2.4 How Will You Be Using Technology to Improve Teaching and Learning in Foreign Language?

The goal of section 2.4 is to identify the major elements of your district's plans to use technology to enhance teaching and learning in Foreign Language at the elementary, middle and secondary levels over the next three years.

The primary objective is that you provide a brief description of two or three broad-based practices being utilized by the majority of your district's teachers to use technology to improve teaching and learning at the elementary, middle and secondary levels. For example, if all or most of your fifth through seventh grade Foreign Language teachers are requiring students to conduct internet research or produce multimedia presentations on a regular basis; this would qualify as a broad-based practice. But if only a fraction of your teachers are regularly using these tools in the classroom – do not portray it as a broad-based practice.

Please feel free to include information about significant technology integration practices which are, by nature, not

broad-based. For example, if a high school science teacher is using simulation software to allow students to conduct virtual experiments which are too dangerous to replicate in the classroom or lab; please indicate this in the Science curriculum area at the high school level only.

Using the ACOT Scale and the grid below, indicate your school's current level of effective technology integration in the Foreign Language instructional process, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

### Current Levels of Technology Integration in Foreign Language

1.0 **Entry** - Learn the basics of using the new technology.

2.0 **Adoption** - Use new technology to support traditional instruction.

3.0 **Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.

4.0 **Appropriation** - Focus on cooperative, project-based, and interdisciplinary work - incorporating the technology as needed and as one of many tools.

5.0 **Invention** - Discover new uses for technology tools, for example, developing spreadsheet macros for teaching algebra or designing projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	N/A	N/A
K-4	N/A	N/A
5-8	N/A	N/A
9-12	N/A	N/A

### How will we get there?

As the career-technical education center for six neighboring secondary districts, WCCC currently does not offer Foreign Language courses to secondary students. WCCC students have the opportunity to take foreign language for credit in grades 7 -12 within their partner school districts and may elect to enter a virtual course offering through the Warren County ECS. The potential of offering foreign language as an elective through a video distance learning cooperative with partner districts or a virtual course offering is currently under investigation.

For these reasons, WCCC is not involved in a formal foreign language program and this section of the ACS is not applicable.

### How will we know we're getting there?

N/A

### How will we sustain focus and momentum?

N/A

## 2.5 How Will You Be Using Technology To Improve Teaching and Learning In Mathematics?

The goal of section 2.5 is to identify the major elements of your district's plans to use technology to enhance teaching and learning in Mathematics at the elementary, middle and secondary levels over the next three years.

The primary objective is that you provide a brief description of two or three broad-based practices being utilized by the majority of your district's teachers to use technology to improve teaching and learning at the elementary, middle and secondary levels. For example, if all or most of your fifth through seventh grade Mathematics teachers are requiring students to conduct internet research or produce multimedia presentations on a regular basis; this would qualify as a broad-based practice. But if only a fraction of your teachers are regularly using these tools in the classroom – do not portray it as a broad-based practice.

Please feel free to include information about significant technology integration practices which are, by nature, not broad-based. For example, if a high school science teacher is using simulation software to allow students to conduct virtual experiments which are too dangerous to replicate in the classroom or lab; please indicate this in the Science curriculum area at the high school level only.

Using the ACOT Scale and the grid below, indicate your school's current level of effective technology integration in the Mathematics instructional process, as well as your target levels for improvement. If your responses fall between

whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

### Current Levels of Technology Integration in Mathematics

1.0 **Entry** - Learn the basics of using the new technology.

2.0 **Adoption** - Use new technology to support traditional instruction.

3.0 **Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.

4.0 **Appropriation** - Focus on cooperative, project-based, and interdisciplinary work - incorporating the technology as needed and as one of many tools.

5.0 **Invention** - Discover new uses for technology tools, for example, developing spreadsheet macros for teaching algebra or designing projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	N/A	N/A
K-2	N/A	N/A
3-4	N/A	N/A
5-7	N/A	N/A
8-10	N/A	N/A
11-12	3.0	4.0

### How will we get there?

The Mathematics Department at WCCC is in an adaptation state and moving toward innovation. They completed the curriculum revision process in 2006 and took a major step toward technology integration with the adoption of online texts, a mobile laptop cart, and interactive software for enrichment and instruction in algebra, geometry, and pre-calculus. Do to unfortunate circumstances, the department experienced 50% turnover for the 2008-09 school year. The instructors no longer with the district were leaders in the use and integration of technology in the mathematics classrooms.

Currently, there are four mathematics classrooms. Each room has a ceiling mounted projector, a Smartboard, and a teacher computer. There is a classroom set of TI 84 graphing calculators for every two mathematics teachers and each teacher has a set of scientific calculators. The Mathematics Department houses two 16 computer laptop carts connected to the WCCC network via 802.11G wireless which provides Internet and printer access. The laptops provide student access to a TI83+ simulator and programming software and additional mathematics software including Derive, The Geometer's Sketchpad, Fathom, Excel, and Cognitive Tutor. All of the four mathematics classrooms have a monochrome laser printer on the network. The adopted textbook company for the Mathematics Department is Prentice Hall who provides online interactivity for both teachers and students, accessible via the laptops. Students having Internet access at home can access their online textbook at home and of course public Internet is always available. All students have accounts for the online textbook. Printed textbooks are also available. Students currently work on group projects and individual assignments using their new technology in addition to using the technology as an enhancement to their study of the curriculum.

The Mathematics Department instructors have taken advanced Smartboard training and are comfortable in their use of this technology. They are developing unified lesson plans around the technology and they are teaching a common curriculum and working toward common assessments in the future. These instructors are also open to exploring new software packages and new ways to use and innovate with their technology.

The next curriculum review for the Mathematics Department will be in 2010-2011.

WCCC desires the Math department to train in and adopt use of Web 2.0 technology or interactive Internet use with students. Training is being offered during the 2008-09 school year on Sharepoint Services 3.0 and on Web 2.0 for instruction. Students are actively engaged in Web 2.0 social networking in their personal lives. WCCC recognizes the current trend and movement in education to tap into the way students prefer to communicate and turn it into a positive learning tool and environment for all students. Digital Storytelling, podcasting, wiki development, and online journaling through blogs are all encouraged.

Goals:

1. Increased coordination and sharing of smartboard oriented lessons, group projects, and use of student

response systems

2. Adoption and use of Web 2.0 technology into the Mathematics curriculum
3. Increased Academic integration into the Career Technical programs fostered by a true Academy model for the district. This goal would include group and individual projects that span all ACS areas and the student's Career Technical program of study.
4. Regain momentum in technology integration lost by turnover in the department

#### **How will we know we're getting there?**

Overall, the math department holds good continuity with the use and integration of technology into the curriculum. The math department is eager and willing to change and we continue to encourage and attempt to influence all instructors in the department.

As the new members of the department get more acclimated, we anticipate their increased participation in the use of the laptop carts and software applications. In fall of 2009, two new Mathematics classrooms will be completed for use and will each have a Smartboard, teacher computer, five student computers, network printing, and wireless access. In the fall of 2008, each Math Department teacher received a new computer capable of driving a smartboard and multimedia functions.

The Math Department is under consideration for adoption of new technology prior to their next curriculum review in 2010-11. It is desired to make student access to technology within this department more equitable at that time and tie that access directly into the revised curriculum document. As curriculum is upgraded, technology incorporation into curriculum will promote higher learning practices.

The Curriculum Director and Principal are responsible for examining planning and methodology by the teachers. The evaluation process monitors and makes recommendations on the effectiveness and use of technology in the teaching methodology. It is the role of the Technology Coordinator to ensure that all instructors have opportunities for professional development and access to technology needed to support the curriculum and the goals in this document.

The Technology Committee holds departmental roundtable sessions with each department twice per year. The first session is a review of this document and the goals contained therein. This sparks the document revision process and gets the department thinking and planning their purchase requests for the next fiscal year. The second roundtable covers the technology purchasing process focused on curricular integration and common methodology within the department.

Student progress with the use of technology in the Math Department is measured by OGT test scores, Academic evaluations through High Schools that Work, and Classroom level assessments. Both students and staff are given surveys from which data is used to measure effective use and access to technology for all departments.

Informal measures include the quantity/frequency of technology and media items checked out from the media center and Web 2.0 content generated.

We will know we have met our goals when our students are doing project work that includes English, Science, Social Studies, Mathematics, and their Career Technical Program. We will know we have met our goals when the math department has and uses a minimum of one set of student response clickers and when each classroom has five student computers that are used daily in addition to the shared laptop carts. We will also know we have met our goals when we see students generating web 2.0 content. The ultimate gage would be to see our science classes interacting with other math classes world-wide.

#### **How will we sustain focus and momentum?**

As stated above, it is the responsibility of the Technology Committee to examine trends in new and emerging technology and to survey staff to determine professional development desires and needs. It is the responsibility of the Technology Coordinator to lead the committee, stay abreast of trends and emerging technology, and to plan, schedule, and coordinate professional development activities for staff and students use and integration of technology.

The Technology Coordinator attends Ed Tech conferences annually offered by SOITA (Southwest Ohio Instructional Technology Association) and ETech Ohio. The annual Ohio ACTE conference is also attended and provides valuable insight into technology integration into Career Tech programs. Information attained at

these conferences is brought back to the Technology Committee for review and discussion. The staff is surveyed every Spring and a Technology Professional Development program is then published and includes summer activities, after school workshops, and weekend classes. All activities are pre-approved by the LPDC committee for CEU credit. Activities are taught by one of the following: SOITA staff, Technology Department Staff, WCCC Adult Education Staff. Courses led by SOITA allow teachers the opportunity to purchase graduate credit from the University of Dayton.

It is our belief that our students know no fear of technology and have technology use ingrained in their daily lives. It is our belief that a well trained staff is the key to sustaining momentum and achieving the goals set forth for our Math Department. To this end, the technology committee will continue to engage and encourage staff participation in professional development activities and growth in the use and integration of technology into the curriculum.

## 2.6 How Will You Be Using Technology to Improve Teaching and Learning in Science?

The goal of section 2.6 is to identify the major elements of your district's plans to use technology to enhance teaching and learning in Science at the elementary, middle and secondary levels over the next three years.

The primary objective is that you provide a brief description of two or three broad-based practices being utilized by the majority of your district's teachers to use technology to improve teaching and learning at the elementary, middle and secondary levels. For example, if all or most of your fifth through seventh grade Science teachers are requiring students to conduct internet research or produce multimedia presentations on a regular basis; this would qualify as a broad-based practice. But if only a fraction of your teachers are regularly using these tools in the classroom – do not portray it as a broad-based practice.

Please feel free to include information about significant technology integration practices which are, by nature, not broad-based. For example, if a high school science teacher is using simulation software to allow students to conduct virtual experiments which are too dangerous to replicate in the classroom or lab; please indicate this in the Science curriculum area at the high school level only.

Using the ACOT Scale and the grid below, indicate your school's current level of effective technology integration in the Science instructional process, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

### Current Levels of Technology Integration in Science

1.0 **Entry** - Learn the basics of using the new technology.

2.0 **Adoption** - Use new technology to support traditional instruction.

3.0 **Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.

4.0 **Appropriation** - Focus on cooperative, project-based, and interdisciplinary work - incorporating the technology as needed and as one of many tools.

5.0 **Invention** - Discover new uses for technology tools, for example, developing spreadsheet macros for teaching algebra or designing projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	N/A	N/A
K-2	N/A	N/A
3-5	N/A	N/A
6-8	N/A	N/A
9-10	N/A	N/A
11-12	3.0	4.0

### How will we get there?

The Science Department at WCCC is in an adoption state with technology integration, meaning that technology is used to support traditional instruction.

Currently, there are four science classrooms. Two rooms have five student workstations, one has six, and another has four. Each student workstation has Internet access and printing capability and all science

classrooms have a teacher workstation, a Smartboard with a ceiling mounted projector, and a monochrome laser printer. Textbooks adopted by the science department are published by a mixture of approved vendors by the Ohio Department of Education (ODE). The science department currently has no online textbooks. Technology use is limited to enrichment activities through Internet research and software purchased for individual sciences.

Currently, the Science department uses a laboratory component for the instruction of chemistry and physics. Certain modules in biology, anatomy and physiology, and environmental science also utilize hands-on laboratory methodology. The use of technology to enhance and enrich the student experience for hands-on activities is under investigation and includes but is not limited to computer data analysis software; computer enhanced microscopes; computer software for theorizing, modeling and analyzing; and new enrichment software for each science course.

WCCC desires the Science department to train in and adopt use of Web 2.0 technology or interactive Internet use with students. Training is being offered during the 2008-09 school year on Sharepoint Services 3.0 and on Web 2.0 for instruction. Students are actively engaged in Web 2.0 social networking in their personal lives. WCCC recognizes the current trend and movement in education to tap into the way students prefer to communicate and turn it into a positive learning tool and environment for all students. Digital Storytelling, podcasting, wiki development, and online journaling through blogs are all encouraged.

Several of the instructors have begun to utilize streaming Internet content to provide students access to experiments and documentation that they cannot replicate in their labs.

#### Goals:

1. Increased use of high quality Multimedia Technology including Intranet and Internet Streams
2. Common Methodology with shared resources which includes the use of smartboards, group projects, student response systems, and common assessments
3. Increased integration of Web 2.0 technology into the Science curriculum and methodology including digital storytelling, blogging, journaling, and wiki group projects
4. Increased Academic integration into the Career Technical programs fostered by a true Academy model for the district. This goal would include group and individual projects that span all ACS areas and the student's Career Technical program of study.

#### **How will we know we're getting there?**

Overall, the Science Department holds good continuity with the use and integration of technology into the curriculum. The Science Department is eager and willing to change and we continue to encourage and attempt to influence all instructors in the department.

In the fall of 2009, two new Science classrooms/labs will be completed for use and will each have a Smartboard, teacher computer, five student computers, network printing, and wireless access. Additionally, the department will receive a wireless laptop cart for use in documentation and analysis during experiments in the new labs. The science teachers have had full input into the design and purchasing for these new labs. In the fall of 2007, each Science Department teacher received a new computer capable of driving a smartboard and multimedia functions.

The Science Department is under consideration for adoption of new technology prior to their next curriculum review in 2010-11. It is desired to make student access to technology within this department more equitable at that time and tie that access directly into the revised curriculum document. As curriculum is upgraded, technology incorporation into curriculum will promote higher learning practices.

The Curriculum Director and Principal are responsible for examining planning and methodology by the teachers. The evaluation process monitors and makes recommendations on the effectiveness and use of technology in the teaching methodology. It is the role of the Technology Coordinator to ensure that all instructors have opportunities for professional development and access to technology needed to support the curriculum and the goals in this document.

The technology committee holds departmental roundtable sessions with each department twice per year. The first session is a review of this document and the goals contained therein. This sparks the document revision process and gets the department thinking and planning their purchase requests for the next fiscal year. The

second roundtable covers the technology purchasing process focused on curricular integration and common methodology within the department.

Student progress with the use of technology in the Science Department is measured by OGT test scores, Academic evaluations through High Schools that Work, and Classroom level assessments. Both students and staff are given surveys from which data is used to measure effective use and access to technology for all departments.

Informal measures include the quantity/frequency of technology and media items checked out from the media center and Web 2.0 content generated.

We will know we have met our goals when our students are doing project work that includes English, Science, Social Studies, Mathematics, and their Career Technical Program. We will know we have met our goals when the Science Department has a minimum of one set of student response clickers, and we see the new mobile laptop cart and each of the five student computers in their classroom used daily. We will also know we have met our goals when we see students generating web 2.0 content and engaged by more streaming Intranet/Internet content. The ultimate gage would be to see our science classes interacting with other science classes world-wide.

#### **How will we sustain focus and momentum?**

As stated above, it is the responsibility of the Technology Committee to examine trends in new and emerging technology and to survey staff to determine professional development desires and needs. It is the responsibility of the Technology Coordinator to lead the committee, stay abreast of trends and emerging technology, and to plan, schedule, and coordinate professional development activities for staff and students use and integration of technology.

The Technology Coordinator attends Ed Tech conferences annually offered by SOITA (Southwest Ohio Instructional Technology Association) and ETech Ohio. The annual Ohio ACTE conference is also attended and provides valuable insight into technology integration into Career Tech programs. Information attained at these conferences is brought back to the Technology Committee for review and discussion. The staff is surveyed every Spring and a Technology Professional Development program is then published and includes summer activities, after school workshops, and weekend classes. All activities are pre-approved by the LPDC committee for CEU credit. Activities are taught by one of the following: SOITA staff, Technology Department Staff, WCCC Adult Education Staff. Courses led by SOITA allow teachers the opportunity to purchase graduate credit from the University of Dayton.

It is our belief that our students know no fear of technology and have technology use ingrained in their daily lives. It is our belief that a well trained staff is the key to sustaining momentum and achieving the goals set forth for our Science Department. To this end, the technology committee will continue to engage and encourage staff participation in professional development activities and growth in the use and integration of technology into the curriculum.

## **2.7 How Will You Be Using Technology to Improve Teaching and Learning in Social Studies?**

The goal of section 2.7 is to identify the major elements of your district's plans to use technology to enhance teaching and learning in Social Studies at the elementary, middle and secondary levels over the next three years.

The primary objective is that you provide a brief description of two or three broad-based practices being utilized by the majority of your district's teachers to use technology to improve teaching and learning at the elementary, middle and secondary levels. For example, if all or most of your fifth through seventh grade Social Studies teachers are requiring students to conduct internet research or produce multimedia presentations on a regular basis; this would qualify as a broad-based practice. But if only a fraction of your teachers are regularly using these tools in the classroom – do not portray it as a broad-based practice.

Please feel free to include information about significant technology integration practices which are, by nature, not broad-based. For example, if a high school science teacher is using simulation software to allow students to conduct virtual experiments which are too dangerous to replicate in the classroom or lab; please indicate this in the Science curriculum area at the high school level only.

Using the ACOT Scale and the grid below, indicate your school's current level of effective technology integration in the Social Studies instructional process, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

### Current Levels of Technology Integration in Social Studies

1.0 **Entry** - Learn the basics of using the new technology.

2.0 **Adoption** - Use new technology to support traditional instruction.

3.0 **Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.

4.0 **Appropriation** - Focus on cooperative, project-based, and interdisciplinary work - incorporating the technology as needed and as one of many tools.

5.0 **Invention** - Discover new uses for technology tools, for example, developing spreadsheet macros for teaching algebra or designing projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	N/A	N/A
K-2	N/A	N/A
3-5	N/A	N/A
6-8	N/A	N/A
9-10	N/A	N/A
11-12	3.0	4.0

### How will we get there?

Currently, there are four Social Studies classrooms each with five student workstations with Internet and printer access. All classrooms have teacher workstations. These workstations will be used for enrichment and research. Each Social Studies classroom has a teacher workstation, Smartboard, and ceiling mounted projector. Textbooks adopted by the Social Studies department are published by a mixture of approved vendors by the Ohio Department of Education (ODE). The Social Studies department currently has Prentice Hall Textbooks with software supplements and online materials.

Technology use in the Social Studies Department includes Microsoft Office Word for student papers and written work and Powerpoint for presentations of student projects and teacher lessons. Prentice Hall software is also utilized. Teachers are also engaging students with Internet research, multimedia in disk and streaming forms, and extensive writing projects.

The next curriculum review for the Social Studies Department will be in 2009-2010. It is desired to enhance the access to technology within this department at that time and tie that access directly into the revised curriculum document.

WCCC desires the Social Studies department to train in and adopt use of Web 2.0 technology or interactive Internet use with students. Training is being offered during the 2008-09 school year on Sharepoint Services 3.0 and on Web 2.0 for instruction. Students are actively engaged in Web 2.0 social networking in their personal lives. WCCC recognizes the current trend and movement in education to tap into the way students prefer to communicate and turn it into a positive learning tool and environment for all students. Digital Storytelling, podcasting, wiki development, and online journaling through blogs are all encouraged.

### Goals:

1. Increased use of high quality Multimedia Technology including DVD and Intranet/Internet Streams
2. Common Methodology and sharing of lessons which includes the use of smartboards, group projects, student response systems, and common assessments
3. Integration of Web 2.0 technology into the Social Studies curriculum and methodology including digital storytelling, blogging, journaling, and wiki group projects
4. Increased Academic integration into the Career Technical programs fostered by a true Academy model for the district. This goal would include group and individual projects that span all ACS areas and the student's Career Technical program of study.

### How will we know we're getting there?

Overall, the Social Studies Department holds good continuity with the use and integration of technology into the curriculum. The Social Studies Department is eager and willing to change and we continue to encourage and attempt to influence all instructors in the department.

Interest has been expressed for a portable wireless laptop cart to share between classrooms. In fall of 2009, two new Social Studies classrooms will be completed for use and will each have a Smartboard, teacher computer, five student computers, network printing, and wireless access. In the fall of 2007, each Social Studies Department teacher received a new computer capable of driving a smartboard and multimedia functions.

The Social Studies Department is under consideration for adoption of new technology prior to their next curriculum review in 2010-11. It is desired to make student access to technology within this department more equitable at that time and tie that access directly into the revised curriculum document. As curriculum is upgraded, technology incorporation into curriculum will promote higher learning practices.

The Curriculum Director and Principal are responsible for examining planning and methodology by the teachers. The evaluation process monitors and makes recommendations on the effectiveness and use of technology in the teaching methodology. It is the role of the Technology Coordinator to ensure that all instructors have opportunities for professional development and access to technology needed to support the curriculum and the goals in this document.

The technology committee holds departmental roundtable sessions with each department twice per year. The first session is a review of this document and the goals contained therein. This sparks the document revision process and gets the department thinking and planning their purchase requests for the next fiscal year. The second roundtable covers the technology purchasing process focused on curricular integration and common methodology within the department.

Student progress with the use of technology in the Social Studies Department is measured by OGT test scores, Academic evaluations through High Schools that Work, and Classroom level assessments. Both students and staff are given surveys from which data is used to measure effective use and access to technology for all departments.

Informal measures include the quantity/frequency of technology and media items checked out from the media center and Web 2.0 content generated.

We will know we have met our goals when our students are doing project work that includes English, Science, Social Studies, Mathematics, and their Career Technical Program. We will know we have met our goals when the Social Studies Department has a minimum of one set of student response clickers, and we see a new mobile laptop cart and each of the five student computers in their classroom used daily. We will also know we have met our goals when we see students generating web 2.0 content and being engaged by more streaming Intranet/Internet content. The ultimate gage would be to see our science classes interacting with other science classes world-wide.

#### **How will we sustain focus and momentum?**

As stated above, it is the responsibility of the Technology Committee to examine trends in new and emerging technology and to survey staff to determine professional development desires and needs. It is the responsibility of the Technology Coordinator to lead the committee, stay abreast of trends and emerging technology, and to plan, schedule, and coordinate professional development activities for staff and students use and integration of technology.

The Technology Coordinator attends Ed Tech conferences annually offered by SOITA (Southwest Ohio Instructional Technology Association) and ETech Ohio. The annual Ohio ACTE conference is also attended and provides valuable insight into technology integration into Career Tech programs. Information attained at these conferences is brought back to the Technology Committee for review and discussion. The staff is surveyed every Spring and a Technology Professional Development program is then published and includes summer activities, after school workshops, and weekend classes. All activities are pre-approved by the LPDC committee for CEU credit. Activities are taught by one of the following: SOITA staff, Technology Department Staff, WCCC Adult Education Staff. Courses led by SOITA allow teachers the opportunity to purchase graduate credit from the University of Dayton.

It is our belief that our students know no fear of technology and have technology use ingrained in their daily lives. It is our belief that a well trained staff is the key to sustaining momentum and achieving the goals set forth for our Social Studies Department. To this end, the technology committee will continue to engage and encourage staff participation in professional development activities and growth in the use and integration of technology into the curriculum.

## 2.8 How Are You Teaching Students About Technology Itself?

The goal of Phase 2.8 is for district technology planning staff to describe your district's efforts to teach students what they need to know and be able to do in order to meet Ohio's technology content standards.

**IMPORTANT NOTE:** Phase 2.8 is about technology as its own academic content standard and focuses on specific technology courses.

Phase 2.8 is the place to indicate what technology instruction you are offering at the elementary, middle and secondary levels. Examples of these "pure technology" courses would include, but are not limited to: career technology, library media, keyboarding, multi-media or digital video production, web page authoring, network administration, etc.

As you are considering how you will teach the technology academic content standards, consider reviewing your Comprehensive Continuous Improvement Plan (CCIP) goals and strategies.

### Activity

Using the Apple Classroom of Tomorrow (ACOT) Scale and the grid below, indicate your school's current level of effective technology integration specifically concerning technology courses, as well as your target levels for improvement. If your responses fall between whole numbers, such as between 3.0 and 4.0, feel free to use .5 increments such as 3.5.

### Instructional Integration

1.0 **Entry** - Learn the basics of using the new technology.

2.0 **Adoption** - Use new technology to support traditional instruction.

3.0 **Adaptation** - Integrate new technology into traditional classroom practice. Here, they often focus on increased student productivity and engagement by using word processors, spreadsheets, and graphics tools.

4.0 **Appropriation** - Focus on cooperative, project-based, and interdisciplinary work - incorporating the technology as needed and as one of many tools.

5.0 **Invention** - Discover new uses for technology tools, for example, developing spreadsheet macros for teaching algebra or designing projects that combine multiple technologies.

	Where are we now?	Where do we want to go?
Pre-K	N/A	N/A
K-2	N/A	N/A
3-5	N/A	N/A
6-8	N/A	N/A
9-10	N/A	N/A
11-12	3.0	4.5

### How will we get there?

As a Career Technical high school, teaching students about technology is integrated into every curricular area. Each Career Technical program has technology infused into their curriculum and many programs are technology based such as Information Technology Tech Prep, Digital Design Tech Prep, Graphic Arts Tech Prep, and Business Technology Tech Prep. Most program names contain the word "Technology". Online curriculums are used in the Automotive programs and even programs such as welding, carpentry, and electrical use technology as a supplement to curriculum and have curriculum modules based on technology.

We have already discussed in this document the technology goals and standards for our academic departments. 100% of our students take a Career Technical program that has a minimum of 1 module of curriculum that is on technology proficiency. 100% of our students complete a Career Passport which includes the use of online resources such as Kuder and OCIS. 100% of our students use word processing and presentations software to write papers and present projects.

As stated above, our students know no fear with regard to technology. They are infused in communications

technology from a very early age. WCCC recognizes the key to being successful in fostering a strong technological learning environment for our students is in staff development and training. As stated above, the Technology committee meets with all instructors in round table sessions twice per year - once to review their portion of this document as it pertains to them, and once to take them through the technology planning and purchasing outlined later in this document. The Technology Committee polls staff and stays abreast of current trends and innovations in education technology. It is the responsibility of the Technology Coordinator to attend workshops and conferences to inform the committee and to make recommendations. The data gathered is developed into a Technology Professional Development program open to all staff members. It is the responsibility of the Technology Coordinator to organize and facilitate that Professional Development program. Participation in PD activities is documented by sign in sheet and provided to the Local Professional Development Committee. These workshops are taught by either SOITA staff, Technology Department staff, or our Adult Education Staff. The primary focus for our PD activities during the lifetime of this document is "Embracing and Utilizing Web 2.0 Technology into the Classroom."

WCCC currently offers 100 mbps networking to every desktop. Students can access their data from any computer in our facility through their network storage. There are three public computer labs which teachers can sign up for. Many Career Technical program labs are computer labs. Every academic classroom has a minimum of three student computers with Internet and print access.

#### Goals:

1. We are investigating Microsoft Live@EDU and will write policy regarding student email accounts obtained therein. We hope to pilot use of this technology in Spring 09 and expand its offering during the lifetime of this document.
2. We continue to infuse new hardware into the district with the goal of maintaining an average computer age of 3 years.
3. We continue to grow and add new programming. Many new programs are in our feeder high schools. Continued growth with state of the art technology makes a valuable impression in our community and with our partner districts. It is our goal to keep these programs current with new technology and continue our growth.
4. Continued growth and participation in our PD program. We would like to partner with a local college to offer purchased graduate credit.
5. Smartboards in every classroom and student response systems per department/academy
6. Increase the mobility of our environment with laptop carts and improved wireless networking

#### How will we know we're getting there?

Goal 1: The Administration Team will target a class or program to enter into the Live@Edu as a pilot Spring of 09. The Technology Coordinator will develop policy regarding the use of this technology that will go to the Board of Education for approval. If the pilot is successful, the technology will be offered to additional programs and classes over time. Evaluation will be coordinated by the Technology Coordinator, the teacher(s) involved, and the Administration Team.

Goal 2: The Technology Coordinator keeps a running inventory of all systems and updates it each year with new purchases. By maintaining an average age of 3 years for computers, WCCC can maintain a 6 year life cycle. The Technology Coordinator retires and recycles the oldest computers and replaces computers in key locations first such as technology labs, administrative support staff, public computers labs, etc and executes a plan to trickle older machines into less rigid use. The oldest of computers are placed in academic classrooms for student use in Internet research, word processing, and project preparation. The Technology Coordinator documents all phase in/phase out and submits a report to the Administration Team.

Goal 3: The Technology Coordinator is responsible for the planning and implementation of technology in all programs. The Curriculum Director is responsible for new programming and maintenance of standards in every program. Evaluation of the effectiveness of technology and the image portrayed by our satellite programs is a joint effort between the Curriculum Director, the Technology Coordinator, and the teachers.

Goal 4: Our Technology Professional Development Program is the responsibility of the Technology Coordinator. Survey data is used both in planning the program and evaluating the success of every activity therein. Participation is tracked and growth is monitored both in content offered and staff participation.

Goal 5: The Media Center Coordinator is an excellent resource and very helpful to staff in ensuring they are using technology properly. She is instrumental in the success of our smartboard utilization. We currently have Smartboards in 100% of our math, science, and social studies classrooms and 33% of our English classrooms. Our new building addition will provide 8 new smartboards in Fall 09. The Technology Coordinator is responsible for the purchase, installation, maintenance, and staff training for this technology and evaluation is based on use, need, and desire. Staff members must participate in Smartboard training and demonstrate its

use prior to receiving a Smartboard in their classroom.

Goal 6: We currently have 2 carts dedicated to mathematics, 1 dedicated to automotive trades, 1 in the media center, and 1 in the teacher academy. Our wireless access points are not lightweight but have the ability to be converted. It is the Technology Coordinator's responsibility to plan, implement, and maintain the wireless network and to work with staff on the needs assessment, planning for purchase, training, and implementation of laptop cart technology.

#### **How will we sustain focus and momentum?**

Our Technology Professional Development program is well documented here. This program is revised and rebuilt annually. It takes a well trained staff to promote student achievement in technology. In addition to our program, staff is provided with access to Atomic Learning and opportunities from ETech Ohio and SOITA.

WCCC recognizes that technology continues to grow and change at an exponential rate. The Technology Department staff is engaged in professional organizations, conferences, journal subscriptions, and online research. They have an excellent office/workshop area ideal for bench testing and running trials on new technology. It is the Technology Coordinator's role to steer the district in the proper direction and keep WCCC current and on the edge of new technologies. This Technology Plan sets forth goals for the district and these goals are revisited annually, evaluated, revised, and taken to the local Board of Education for adoption. The entire Administration Team is part of this process. ETech Ohio and the ERate program only require revision once per three years for a three year Technology Plan. The WCCC revision cycle for the local copy of this plan is expressed best by the Technology Committee agenda calendar:

August: Summer purchases and implementation, review of plan

September: Professional Development program, Assignments for Curriculum Alignment and Instructional Integration Roundtable sessions

October: Curriculum Alignment and Instructional Integration Roundtables (CAIIR)

November: Review of CAIIR and revisions to be made, Review of Technology Policy, Leadership, and Administration (TPLA)

December: Technology Coordinator's roundtable with the Administration TEAM on TPLA

January: Review an revisions of TPLA, review of Technology Infrastructure, Management, and Support (TIMS)

February: Open agenda items, Assignments for Technology Planning/Purchasing roundtables, revisit Professional Development Program

March: Initial review of Requests for Technology submitted by programs/departments, feedback from Technology Coordinator regarding supervisory meetings on requests for technology, Professional Development Planning

April: Second review of Requests for Technology including feedback from the purchasing authority (Director) regarding budget planning, review of the Technology Department Budget request

May: Final look at requests for technology, review of Budget and Planning Revisions, adoption of Professional Development plan for the following year, and celebrate!

Ultimately, the Technology Coordinator and the Technology Department are the resource and the tool used by the Technology Committee and the Administration Team to evaluate effectiveness of our organization, student achievement of Technology Content Standards, and to keep our organization moving forward in technology growth, utilization, and integration.

## Technology Policy, Leadership and Administration

### 3.1 Analyzing District Education Technology Policies

**Awareness** - Policy is not in place; little or no understanding of importance of policy

**Adoption** - Traditional policies are in place; lack of consistent use

**Exploration** - New/updated policies are being researched

**Transformation** - Policies support high performing learning environments

	Where are we now?	Where do we want to go?
A. Electronic network linking district with other stakeholders for information exchange, collaboration and distance education	Exploration	Transformation
B. District wide program providing data or administrative systems to schools (e.g., fiscal databases, student assessment results)	Exploration	Transformation
C. Technology-related facilities design, equipment and software	Transformation	Transformation
D. Technology acquisition and standards	Transformation	Transformation
E. Research and evaluation of educational technology initiatives	Transformation	Transformation
F. Development and dissemination of educational technology devices, applications and approaches	Exploration	Transformation
G. District funding for educational technology	Transformation	Transformation
H. Equity and access to technology	Transformation	Transformation

#### How do we get there?

Ed Tech policy development begins with the Tech Coordinator. The need for policy development comes from a variety of sources including but not limited to legislation, changes in technology impacting current policy, and adoption of new technology. As a member of the Administration Team, the Technology Coordinator ensures that policy is sound and comprehensive in covering all staff and students of WCCC. The Technology Coordinator submits drafts of policy to the Administration team and makes all appropriate revisions. At final draft stage, policy is screened by legal counsel. Policy then goes to the Board of Education for approval. Once approved, the policy is posted online for public view.

A. WCCC is currently linked to most Warren County school districts in a fiber ring that is part of the Third Frontier Network. This bandwidth provides interdistrict communication with partner schools and the ability to provide high quality video distance learning. The Technology Department has implemented an Intranet/Extranet utilizing Sharepoint Services 3.0 provides key information to stakeholders including parents, the public, staff, students, and business partners. It is our goal to find new ways to utilize our bandwidth and to expand the geographic boundaries of our facility by developing online partnerships worldwide through the use of Web 2.0 technologies.

B. WCCC currently uses an online gradebook, Progress Book, which provides secure Internet access for parents, students, and teachers. The most important database to the district is Data Analysis for Student Learning (DASL) which provides online data about students to teachers and administrators. Fiscal databases are kept locally in the Treasurer's office with the five year forecast updated twice annually and made public upon Board of Education review. The WCCC public website and the Intranet/Extranet are used to post student achievement and other relevant information for the public. WCCC is investigating the development of a data mart to pull all independent databases into a central location which could expand into a data warehouse.

C. The design of the WCCC facility is focused on Career Technical education which, by nature, is infused with technology. The master building plan includes three phases for additions and renovations, the first phase to be completed fall 2009. The plan design continues with high availability and modern technology. WCCC has goals of remote desktop access for staff and utilization of Microsoft Live@EDU for students to promote productivity off campus.

D. There is a standard in place for the purchase of all telephony, computer, and peripheral technology equipment. As old equipment is phased out, WCCC should be 100% within standard by 2011.

E. Researching initiatives is best done by knowledgeable people through conferences and training. The Technology Department team attends, at minimum, the SOITA and the ETech Ohio conference annually, subscribes to journals, and stays current in education technology initiatives.

F. The Media Center serves as a central location for portable technology devices and coordinator checks devices out to teachers on an as-needed basis. Fixed technology items are planned for during the purchasing process which requires a plan for necessary training prior to approval. These items are disseminated by the Technology Department.

G. WCCC is committed to technology and the standards in this technology plan. Funding is adequate to support and achieve our goals.

H. Equity and Access to Technology is determined by the building level administration, in particular the Director. A database is kept of cost and equipment purchased for each program/classroom over time and is used to ensure maximum student access to technology. WCCC goals for additional access include remote desktop solutions and Microsoft Live@EDU.

### **How do we know we are getting there?**

The Technology plan on file at Etech Ohio is a three year plan and does not include in scope Career Technical standards. A more comprehensive plan is kept locally and undergoes annual revision which is then adopted by the Board of Education. Roundtable sessions are held by the Technology Committee with staff throughout the year and drafts of the plan are accessible on the Intranet/Extranet for all staff. The technology plan and the standards and policies therein become Board of Education approved policy for each fiscal year.

The Board of Education Policy Manual is public record and available online. This contains policies with supplement and include policies held within the local copy of the Technology Plan. A Board Policy is monitored by the Superintendent, the Treasurer, and the Director of Human Resources. The Technology Coordinator monitors technology policy and works with the Administration Team to revise and update policy as needed. When new technology is adopted that requires new policy, the Technology Coordinator drafts the policy and works with the Administration Team to revise the policy. All Board of Education policy goes before legal counsel prior to Board review and approval.

A. An increase in VDL sessions on an annual basis which reaches students in new programs will be a key indicator. An increase in collaboration with our partner districts and stakeholders will also be a key indicator. Finally, an increase in the use of web 2.0 as a classroom methodology that can bridge communications with other classrooms worldwide will be a key indicator.

B. Streamlining of databases combined with the development of a central data reporting system or data mart will be the key indicator here. WCCC has undergone a needs assessment and a fact finding process and is prepared to move forward with development in the near future.

C. The Master Building Renovation Plan is the guiding indicator of our facility design. As we move through the three phases of building and renovation, we will know if we have met key indicators. Achievement of a remote desktop implementation (Citrix or other) for staff will be an indicator as will implementation of Microsoft Live@edu for students.

D. Revision and monitoring of the purchasing process will be the key indicator regarding Technology Acquisition and standards.

E. The scope of the Technology Professional Development Program for staff in spring of each year will be a key indicator in the trends and adoption of Ed Tech initiatives. Another indicator will be the annual purchasing process which impacts the inventory of Technology in the district. A final indicator will be the participation of the Technology Department staff in ongoing education through conferences, classes, workshops, and journals.

F. Records of staff use of portable media and technology devices is kept and databased for annual comparison. The purchasing process provides annual update of technology inventory and related training in addition to a rationale for how the technology purchased will be used. Finally, participation in the Technology Professional Development Program is monitored and provides valuable insight into the staff use of technology and leadership

within staff in Ed Tech Arenas.

G. The purchasing process outlined in detail later in this document is scheduled for the Technology Coordinator to submit a proposed budget to the Superintendent and Treasurer. This is after planning that budget with the division directors. Following budget meetings, the Treasurer issues the Technology Coordinator's budget. Carryover and overexpenditures in that budget are strictly monitored by the Treasurer's office.

H. Key indicators for equity and access to Technology are inventory, the database that tracks expenditures and purchases by program/department, and monitoring use of remote solutions for students and staff.

#### How do we sustain the focus and momentum?

As stated above, the structures are in place to monitor and revise policy in our Education Technology on an annual basis. Input is received by the Technology Committee from staff throughout the school year. Staff receives input from students and Business Advisory Committee members. Survey data is also collected and used. All of the data is gathered and used to revise technology plan annually. Our Administration Team monitors and supports the development and revision of all Education Technology policy. Data is used to evaluate policy and comes from all of the above mentioned sources in addition to the assessments from our continuous improvement plan, High Schools that Work.

Our Technology Department Team stays closely engaged with our ITC, ETech Ohio, and SOITA. Information disseminated from these resources is filed and used in development of technology policy and standards. The Technology Department office has resources of books and journals in addition to online material. The Technology Department has a work area that serves as a test bed for new technology and potential technology implementation for which new policy is often required. All initiatives set forth by the Technology Department are taken to the Administration Team for discussion and evaluation at regular meetings.

As a member of the International Society for Technology in Education (ISTE) and the Association for Career Technical Education (ACTE), WCCC has two more valuable tools in standards and policy in Technology education. Publications from these two organizations are reviewed and compared against standards and policy in the Technology Plan.

### 3.2 Analyzing District Leadership

**Awareness** - These administrators do not use technology. An expectation to use technology with students and staff is not expressed nor do the administrators support the staff in the use of technology.

**Adoption** - Administrators have access to technology but don't use it on a comprehensive basis. Educators in the building are expected to use the technology but not in a powerful way to improve student achievement. Leaders support staff in developing technology skills.

**Exploration** - Leaders encourage and support educators in the use of technology, but the use may not be pervasive throughout the system. Administrators use technology and see some benefit.

**Transformation** - Leadership provides strong vision encompassing all aspects of educational technology. Technology is vital to administrators and is utilized in innovative ways on a daily basis. Administrators fully understand how to use the tools effectively in the classroom and to manage education.

	Where are we now?	Where do we want to go?
A. Instructional leadership, assessment and curriculum	Exploration	Transformation
B. Competencies/Standards (e.g. ISTE NETS-A)	Exploration	Transformation
C. Advocacy for technology	Transformation	Transformation
D. Measures and accountability for effective use	Exploration	Transformation
E. Role model in the use of technology	Exploration	Transformation
F. Professional development	Transformation	Transformation
G. Support for educational technology	Transformation	Transformation
H. Professional practice	Exploration	Transformation

How do we get there?

The Administration Team has varying degrees of Technology Competency. All members are proficient in fundamental technologies such as productivity software, telephony, and communications software. The beauty of the WCCC Administration Team is the willingness of those stronger in competency to help and teach those with less experience. The expectation is very high in our organization that all staff members either be proficient or have a training plan to become proficient in the education technology systems available to them. It is expected that the Administration Team model that expectation and provide encouragement and set expectations for staff through tools such as the evaluation instrument, informal observation/suggestions, and the Technology Professional Development Program.

Goals:

1. The administration remain current and proficient in district software technology including but not limited to Microsoft Office 2007, DASL, Progress Book, Sharepoint Services, Formshare, Ohio Public Schoolworks, and PDExpress in addition to other software packages used specifically in their job.
2. As the district moves forward with new technologies such as a centralized data reporting service or data mart, a remote desktop solution, and integrated voice/data/video technologies, the Administration team will provide a leadership role in learning, implementing, and modeling their use.
3. The Administration team will remain current in their knowledge of policy and standards set forth by the Board of Education and the Technology Plan by taking an active role in the development and evolution of those policies and standards.
4. The Administration team will seek insight into current trends and innovations in education technology and provide input to the Technology Committee and the Technology Coordinator.
5. The Administration team will take advantage of professional development opportunities in education technology both individually and as a group including but not limited to the district Technology Professional Development Program.
6. The Administration team will include suggestions for improvement and innovation with regard to education technology in their evaluation of staff as appropriate.

All tools necessary to achieve these goals are in place including the team environment, the Technology Professional Development Program, the monitoring and revision process for policy and standards, opportunities to attend conferences and seminars, and an effective evaluation tool. The required component is the desire and dedication to stay current, learn new concepts, and participate in both professional development and in the development of district policy and standards for education technology. This means that the goals above must be enticing to all members of the Administration team.

**How do we know we are getting there?**

There is no doubt that WCCC is data driven. While this section of the Technology Plan is more subjective than other areas, statistics derived and used to monitor the goals above include:

1. The number of help desk tickets submitted by each Administration team member and the nature of those tickets as pertaining to software packages. The amount of professional development activities participated in by the Administration Team members. Finally, survey and informal conversational data.
2. As new technologies are developed and implemented, a training model is always a key component. Not only does the Administration Team take part in the planning of this training, they also take an active role in training and implementing the technology. The data is in the plan, training records, and the implementation by staff.
3. While very subjective, all policy subject to change is discussed in Administration meetings. The knowledge of and/or lack thereof is evidenced by meeting attendance and the content of that discussion.
4. The Administration Team Members receive journals with education technology articles, they attend conferences such as ACTE, ETech Ohio, and SOITA, and they interact with peers on the Administration Team, with partner district administration members, and in organizations outside of our local arena. Their input into the technology planning process is well documented by the Technology Coordinator.

5. Participation in activities in our Technology Professional Development Program are tracked and recorded. Activities outside of our district are impossible to track and monitor other than by voluntary verbal input.

6. The evaluation process includes observation, narrative, and recommendations. It is based on Pathwise standards. The evaluators themselves track their suggestions as they pertain to education technology. The Technology Coordinator may become aware of a recommendation if the staff member asks for assistance.

WCCC conducts an annual survey called "Are We Making Progress". The data gathered from staff is compiled and compared to previous years. The survey provides an overall picture of staff perception of the progress we are making as a district including the area of education technology. The technology committee also surveys staff on professional development areas of interest and comfort level with technology systems. The Administration team contributes to the data on these surveys and also examines and evaluates what the data is reporting.

#### **How do we sustain the focus and momentum?**

The WCCC Administration Team takes pride in using data, as much as possible, to make decisions and evaluate them. They recognize the need for more efficient and streamlined access to a centralized data system and to be able to generate customized reports that provide a picture of district and staff progress over time. The administration team has researched and taken steps toward addressing this need. Implementation will occur in the near future. With higher quality data addressing specific areas in education technology, WCCC will continue to grow and move in the right direction.

WCCC uses the continuous improvement plan High Schools that Work. Being actively engaged in this process keeps the district moving forward and looking to the future, a future which certainly includes new and exciting technology. High Schools that Work is a process that deeply involves staff at all levels and is monitored and coordinated by a member of the Administration team.

All said, the technology purchasing process, the Technology Professional Development Program (TPDP), the Administration Team review of policy and standards, the technology planning process, and the technology committee itself are all active tools in ensuring that we not only work toward our goals in leadership but also sustain our momentum. I have already outlined the TPDP and the technology committee running agenda in this document. This is an excellent place to outline our technology purchasing process:

Academic Departments and Career Academies plan as a single unit for hardware and software needs while individual Career Tech Program instructors plan for their program alone. Following is the timeline for the purchasing process:

By February, staff will have coordinated within their programs, departments, and academies to determine their technology needs for the following school year.

By the end of February, technology requests for the following school year will be submitted online. These requests go directly to the Technology Coordinator who then coordinates with each Director to plan budgeting. Requests include a rationale and plan for necessary training.

By mid-March, the request will be accepted or rejected at the Technology Department level with feedback to the initiator. Even if rejected at this level, the Division Director can still approve the request. The Technology Coordinator communicates with the Technology Committee during this stage to ensure alignment with the Technology Plan. All requests posted to Sharepoint are ready for Division Director and Curriculum Director review and collaboration.

By mid-April, the Division Director will have coordinated with the Technology Coordinator and the Curriculum Director to finalize budgeting, priority, and to accept or reject the requests. Feedback will be given to the initiator on Sharepoint.

By mid-May the Technology Coordinator will report back to the Technology Committee with an updated copy of the budget and itemized expenditures for the following school year. The Technology Specialist is then ready to set target dates for implementation and training. Feedback will be given to the initiator of the request through budget meetings with the Division Directors.

In June all requests meeting final approval for the following school year will be converted into requisitions by the Technology Department Specialist and will be signed and coded by the Director. The requisitions will then be forwarded to the Superintendent and the Treasurer for approval. Feedback will be given to the initiator of the request.

By mid-August, all new technology will be implemented and/or deployed by the Technology Department.

By the end of September, all necessary training sessions involving the purchases will be completed.

This purchasing model provide input at all levels, allows for databasing of expenditures by program/department, and allows WCCC to receive deep bulk purchase discounts.

### 3.3 Technology Leader/Coordinator Time Commitments

	Where are we now?	Where do we want to go?
Strategic/Project/Action Planning	3%	3%
Acquisitions/Procurement	10%	10%
Deployment/Implementation of Technology	8%	10%
Maintenance & Repair	38%	18%
End-user Technical Support & Training	3%	15%
Curriculum Alignment & Instructional Integration	3%	10%
Fiscal Management/Grant Applications	7%	8%
Superintendent Cabinet/Executive/Board Meetings	6%	4%
Tech Staff Development & Management	3%	5%
Policy Development, Monitoring & Enforcement	12%	12%
Evaluating New/Emerging Technologies	3%	5%
Other	4%	%
<b>Total</b>	<b>100%</b>	<b>100%</b>

#### Other (please describe):

Staffing has recently changed in the Technology Department with the addition of a Systems Specialist (servers). This has shifted the load on the Technology Coordinator allowing for increased focus on professional development both for staff and for the Technology Department. The department is currently the Curriculum Director, the Technology Specialist (Coordinator), the Systems Specialist, and the Computer/Network Technician.

#### How will we get there?

Professional Development is not at issue here. The Tech Coordinator is an active member of the Administration Team and the Strategic Planning team.

The Technology Purchasing plan is in place and working well. The Curriculum Director and Division Directors provide support and meet all deadlines.

The district hires a student intern from our Information Technology Tech Prep program for summer deployment and implementation. This is of mutual benefit.

The bulk of maintenance and repair falls to the Computer/Network Technician. With the increase of the number of satellite programs in the district, this staff member is on the road a significant amount of time. All Tech Dept staff members pitch in to ensure maintenance and repair is timely.

The Technology Professional Development Program is the vehicle for end-user training. In addition, one on one support is offered as needed by all members of the Tech Dept and the Media Center Coordinator. Additionally, our staff is very generous in helping one another.

The Technology Coordinator works closely with the Curriculum Director both during the curriculum revision process and in the planning and alignment of new Career Technical programs. With the Technology Department falling under the Curriculum Director, the flow of information, data, and organization for curriculum alignment and integration is a natural at WCCC.

The technology purchasing plan is key to fiscal management and keeps the Technology Coordinator on target and keeps planned expenditures within budget. Erate is the large financial application that falls on the shoulders of the Technology Coordinator. The Technology Coordinator also seeks the Ohio K-12 Network grant. The Media Center Coordinator applies for the ETech Ohio professional development grant. The Technology Coordinator is always looking for new ways to secure funding through grants and is always willing to help others write and/or address grant opportunities as they arise.

The Technology Coordinator meets in one to one sessions monthly with the Superintendent. The Administration Team meets weekly and has special meetings when needed including a summer retreat for strategic planning. The Technology Coordinator attends Board meetings at the request of the Superintendent or Treasurer.

With new staffing, Tech Dept development is critical. The WCCC Tech Department reserves one day per month to have a large knowledge transfer. For management, the Technology Coordinator is evaluated by the Curriculum Director and evaluates the Systems Specialist and the Computer Network Technician. As a small, tight-knit department, each member knows their individual responsibility and the responsibility as a whole in serving the organization in the education of our students.

Policy development includes the Technology Plan which is adopted by the Board of Education. The local copy of this plan is revised annually and is more comprehensive in scope and detail than this document. Policy development and monitoring is a coordinated effort of the Technology Committee, the Technology Department, the Administration Team, legal counsel, and the Board of Education. Enforcement falls to the Director and to Human Resources with the Technology Coordinator being a resource for information.

The Technology Department is constantly immersed in new ideas and emerging technologies from reading, online research, peers, conferences, and professional organizations. The Department workspace is conducive to bench testing and trials prior to implementation.

#### **How will we know we are getting there?**

Prior to the hiring of the Systems Specialist, the Tech Coordinator kept a journal which logged time spent performing various tasks each week. This journal provided two pieces of data: it addressed the time measures above and it gave the Administration Team a picture of the staffing needs of the Department. Additionally, it gave the Tech Coordinator insight into how time was being spent and how to focus energy. This journal is no longer being kept, however, this is one tool that can be revived and used to measure and monitor progress if needed.

The checks and balances that dictate the Technology Coordinator's and the Technology Department's time allocation are cut and dry. The Ohio Public School Works ticketing system monitors the quantity of end user trouble tickets and the Department's response time. There are key deadlines that can be monitored with regard to purchasing, planning, and professional development. The knowledge transfer sessions within the Technology Department are a check and balance as well. Completion of curriculum revisions and planning for new Career Tech Programs is another way of monitoring progress. More than any other check and balance, the Administration Team is constantly providing feedback and monitoring the progress of the Technology Department and the Technology Coordinator.

Beyond data and built in checks and balances, survey data is used to monitor and evaluate the progress of the Technology Coordinator and the Technology Department.

#### **How will we sustain focus and momentum?**

Data from the above mentioned sources will be collected and examined. Problem areas and/or standards will be identified and action plans will be developed and implemented to address these problem areas. This will be a joint effort of the Technology Department and the Administration Team.

Professional Development within the Technology Department will continue to grow as the knowledge transfers and resources are shared by Department members. The Technology Department will continue to attend conferences, seminars, and training sessions held by organizations such as our ITC, SOITA, and ETech Ohio. Books, materials, and training will continue to be sought from all avenues for Technology Department Members.

Tuition reimbursement is available should a department member choose to take classes for credit.

The Technology Coordinator will be evaluated annually by the Curriculum Director and recommendations will be made for areas of improvement. Likewise, the Tech Coordinator will evaluate the remaining members of the Department and make recommendations for improvement.

WCCC recognizes that the efforts of the entire Technology Department must be unified and have one overlaying focus: We are here to education students. While the Technology Coordinator position includes administrative tasks that the other two positions do not, the Department as a whole serves that one common purpose.

## Technology Infrastructure, Management and Support

### 4.1 Networking, Internet & Telecommunications

This section is designed to speak to the network/telecommunications infrastructure necessary to support the technologies in use by the district for administrative and instructional computing. These uses range from EMIS reporting, shared administrative applications, video on demand (VOD), voice over IP (VoIP) telephony, thin client server access, Internet research and others.

With a wide range of new, converging or expanding services relying heavily on a converged network, capacity planning is imperative to the success of subsequent strategies that use the network. For example, a network using thin client connectivity to servers, with heavy Internet access, file and print services, as well as voice over IP, will need careful network capacity planning to introduce video streaming technologies.

#### ACTIVITY 1:

Complete the portfolio of network services and telecommunications services provided. Indicate any changes that you plan to introduce. Use the following scale in answering "Where are we now?"

- **None** - This technology does not currently reside on the network.
- **Some** - There are pieces of this technology residing on the network. It does not exist in all buildings or only in certain places.
- **Many** - This technology is pervasive throughout the district and/or building.

Use the following scale in answering "Where do we want to go"

- **Decrease** - We plan to decrease this technology on the network.
- **No Change** - We plan to maintain the level of technology on the network.
- **Researching** - We are investigating if we want to implement this technology on the network or if we want to increase or decrease this technology on the network.
- **Increase** - We plan to increase this technology on the network.

	Where are we now?	Where do we want to go?
Thin/Network Clients	None	Researching
File and Print Sharing	Many	No Change
Internet Traffic	Many	No Change
Video Conferencing (IP)	Some	Increase
Video Conferencing (ATM)	None	No Change
Video On-Demand (local building/district server)	Some	Increase
Video Streaming (Internet)	Some	Increase
Voice Communications - Voice over IP	Many	No Change
Voice Communications - Centrex/PBX	None	No Change
Remote Access (Dial-up/VPN) to School Resources	Some	Increase
Wireless	Many	Increase
Email	Many	No Change
Enterprise/Shared Applications (e.g., online grade book)	Some	Increase

#### ACTIVITY 2:

Discuss the impact of the network and telecommunications services activity above on the bandwidth requirements of the LAN, WAN and Internet connection. Record the impact on bandwidth below.

	What is the current impact?
LAN Bandwidth	No Changes
WAN Bandwidth	No Changes
Internet Bandwidth	No Changes
Telephone Circuits	No Changes

### How will we get there?

Our current services are:

WAN Connection/ Internet Services - WCCC is connected to a county fiber ring on the Third Frontier Network @ 1 gbps. The current Internet Services contract with our ITC expires June 30, 2009. We will be filing a new Form 470 requesting a multiyear contract for 1 gbps bandwidth.

Email Service - Exchange email is provided by the Technology Department with Office Outlook and Outlook Web Client access. No changes anticipated.

Telephony, Contracted - Our current VoIP system is under contract through 2012 for both maintenance and PRI circuit. Telephone quantity will increase.

Telephony, Month to Month - Our current service goes under a new Form 470 annually. We seek:

Digital Transmission Service - 1 T1 or more, 1.54 mbps each

Telephone Service Local POTS - 7 lines or more, 64 kbps each

Telephone Service Long Distance - Single Service

Telephone Service Directory Assistance Local - Single Service

Telephone Service Directory Assistance National - Single Service

Our criteria of for evaluating bids is 26% cost, 25% ease of transition, 25% local calling area, 24% long distance service. A criteria sheet further delineates the above criteria.

Telephony, Cellular - Our current service is on month to month billing and goes under a new Form 470 annually. We seek:

Telephone Service Wireless/Cellular - 7 lines or more

Telephone Service Wireless/Cellular plus Data + Email - 4 lines or more, 250 kbps or higher

Telephone Service Wireless/Cellular Mobile to Mobile Only - 12 lines or more

Telephone Service Wireless/Cellular Data Only - 1 connection or more, 250 kbps or higher

Our criteria of for evaluating bids is 21% cost, 20% ease of transition, 20% direct mobile to mobile, 20% signal strength, 19% data services add-on. A criteria sheet further delineates the above criteria.

Enterprise level applications include PExpress, Aceware, Exchange Email, and WSS which are available online externally, antivirus, WSUS, WMS, Active Directory, DNS, DHCP, miscellaneous application services, print services, SQL services, SAN Storage, NAS storage, email archiving, and backup software. Our current LAN/WAN bandwidth is more than sufficient.

Our ITC provides DASL, PExpress, D3A2, EMIS, KIOSK, SSWAT, SWAN, USAS, and USPS services online. Our current WAN bandwidth to those services is sufficient.

WCCC also uses a variety of online texts and services driven by curriculum and administrative support. Again, our WAN bandwidth is sufficient.

Goals:

1. Maintain existing WAN/Internet Bandwidth of 1 gbps.
2. Maintain existing LAN bandwidth of 100 mbps to the desktop, yet future proof with all new network adapters and horizontal cabling to be 1 gbps capable.
3. Maintain a maximum of 200 nodes per subnet and segment where necessary.
4. Maintain all vertical (trunk) cabling at 1 gbps with the exception of our Aviation Technology program connected via T1. Future proof all installations for a migration to 10 gbps at the core layer and 1 gbps distribution/access layers.
5. Maintain existing quality and features of service for Telephony and Internet services.
6. Provide Remote Access to the desktop for staff members. Develop/implement policy for use of Microsoft

Live@edu over the next three years.

7. Continue providing key personnel with VPN and RDP remote access to their desktop.
8. Continue expansion of our wireless network coverage over the next three years to eliminate dead zones and improve bandwidth. Integrate wireless security level AES encryption with Active Directory over the next three years.
9. Revive the old Telephone Demarc as a central wiring closet under phase 1 of construction/renovation of the Master Facilities Plan. Monitor subnet size and adhere to bandwidth standards during phase 2 and 3 of this plan.

#### **How will we know we are getting there?**

Much of our goals above are maintaining current levels of service, infrastructure, and bandwidth over the next three years. WCCC currently operates at a high quality of service with regard to network and telephony. The Erate Form 470 provides a public posting of all non-contracted Internet and Telephony services sought and all subsequent Erate documentation is public record and on file.

Our technology committee serves as an outreach to all of our stakeholders and our Intranet/Extranet has a Technology Public page that includes our technology plan and all public documentation that the Committee is working on.

Purchasing is key on several of our goals regarding future proofing of our vertical cabling, core bandwidth, and desktop bandwidth.

1. Our WAN is simple - it is the the connection to the Internet for our single site. The Erate process will determine a new contract for Internet Access to begin July 1 2009.
2. All new purchases of horizontal cable installation and desktop will be 1 gbps capable. Switch purchases will continue to provide 100 mbps to the desktop, although this standard could change over the next three years depending on the associated cost.
3. We currently have two overpopulated subnets. The data is collected directly from the network devices and the cabling. The logical subnetting will take place over the next two years and will require additional vertical cabling to the wiring closets affected.
4. All purchases of distribution level switches will be capable of 10 gbps uplink with module replacement and all fiber optic cable installed will be 10 gbps capable. This will be evidenced through purchasing records.
5. Annual survey data is collected and key indicators for stakeholder satisfaction with technology services, access, and support are included to monitor the quality and features provided.
6. Citrix and other terminal services programs are being researched and considered for implementation for staff remote access to their desktop for off-campus productivity. Microsoft Live@EDU will be piloted Spring, 2009, and a gradual rollout will take place for students as their teachers receive training.
7. The VPN concentrator for WCCC is currently at our ITC. RDP is an open port in the firewall for VPN clients. Documentation of all VPN accounts issued to the district are on file at both locations.
8. Quality of wireless service is easily monitored both by Technology Department sampling and by querying key people who utilize the technology the most. Fewer dead zones and improved speed and reliability are the key indicators. Our current level of wireless encryption is very good, but the convenience to adding an authentication component to it would be an improvement in efficiency for the Technology Department. Completion of this task is the indicator.
9. This goal is targeted under the Master Facilities plan and will happen by Fall, 2009. What remains to be seen during subsequent phases is the impact on existing subnets and bandwidth during subsequent phases of construction/rennovation. The Technology Coordinator sits on the Core Committee for the Master Facilities plan and attends weekly meetings with the Architecture/Engineering firm during the construction/rennovation process.

#### **How will we sustain focus and momentum?**

WCCC currently has no issues with bandwidth or quality of service for networking and telephony. There are no guarantees that this will be the case three years from now. Our plans for growth and expansion do not indicate a need for additional VoIP, network core, or network distribution/access bandwidth. Monitoring of network traffic is an easy thing to accomplish inexpensively with a good linux box and open source software. Another inexpensive approach would be in setting switch level QoS for guaranteed bandwidth on certain types of traffic per subnet. Costly approaches include hiring a third party remote monitoring service or purchasing a bandwidth shaping hardware appliance. Obviously, we have identified two overcrowded subnets, have set a standard for subnet size, and intend to make changes over the next three years. The difficulty with network monitoring is the research and time/cost of implementation. WCCC is approached often by vendors offering remote network monitoring services and hardware appliances. To reach our educational objectives, our plan is:

1. Adhere to the standard of future proofing all purchases for 1 gbps to the desktop and 10 gbps at the core.
2. Monitor survey data to ensure the satisfaction of the staff and students.
3. Perform benchmark testing during peak times to ensure adequate bandwidth and performance.
4. Investigate and test, as time permits, open source network monitoring software
5. Bring all LAN subnets into the standard of no more than 200 nodes per subnet.
6. Enforce QoS traffic shaping if performance becomes an issue that cannot be addressed by one of the above strategies.

WCCC maintains a redundant core that performs all inter-subnet routing. Each subnet has a failover through this redundancy. High availability through redundancy is also be added over the next three years with server virtualization and multiple connectivity points for the server subnet and the storage area network. The reliability of services within the WCCC network is excellent and will continue to improve as these measures are taken.

## 4.2 Access to Technology

**None** - This technology does not exist in the building(s) and/or district.

**Some** - This technology is in the building(s) and district, but there are only a few in each location.

**Pervasive** - This technology is an integral part of the building(s) and/or district.

	Where are we now?	Where do we want to go?
Computer to Teacher Ratio (1:n)	1:1	1:1
Computer to Student Ratio (1:n)	.62:1	.75:1
Peripherals (e.g. scanner, digital camera)	Some	Pervasive
Emerging Technologies	Early adopter	Early adopter
Assistive and adaptive hardware (e.g. Intellikeys, Alpha Smart) and specialized software	Some	Some

### How will we get there?

Our student count is limited to grade 11 and 12 students enrolled in a career technical program either on our campus or in one of our partner districts. WCCC is geographically spread with satellite programs in four of the six partner school districts. Of our satellites, only one does not currently receive its technology equipment and support from WCCC due to a partnership. Partner organizations provide network connectivity to those satellite students. There are currently 423 satellite students in our count. The ratio of .62:1, computers to students, is strictly our grade 11 and 12 students to the computers which they access and does not include computers dedicated to teachers, administration and support. Computer access includes 53 computers in public labs, 127 mobile computers, 66 computers in academic classrooms, 406 computers in career technical Program Labs. Some computers have dedicated function in the career technical lab such as the numerical control computer for our welding lab's plasma cutter.

The purchasing of peripheral equipment is decided by the Director during the purchasing process. Digital Cameras, scanners, camcorders, multimedia decks and other peripherals are housed in the Media Center. They are available for teacher check out through which student access occurs. Many Career Technical programs are permitted to purchase portable peripheral equipment.

WCCC engages in emerging technologies as funding permits including student response systems and handheld gps units available in the media center and interactive whiteboards in terms of hardware. Interactive software, simulation software, and use of Web 2.0 is encouraged for our curriculum.

WCCC has minimal assistive and adaptive hardware including magnification and auditory hardware. WCCC is investigating Kurzweil assistive technology to assist students with disabilities in reading.

Our building construction/renovation process under the Master Facilities Plan will bring change including a new media center. This will greatly impact access to technology for students and staff.

Our technology purchasing process is staff driven. All staff participates in business advisory committees which includes partners from area business, colleges, students, parents, and partner districts. Advisory committees review the technology inventory and make recommendations to the teachers for future purchase and implementation. Teachers then engage the previously detailed purchasing process by submitting a request for technology online by the end of February. The Technology committee works closely with staff and helps with research and training requirements. WCCC holds the expectation that all staff members remain current in their field and technology proficiency through professional development.

Whenever new technology is considered, the Technology Department runs field testing to ensure compatibility, feasibility, and cost-effectiveness prior to implementation.

Goals:

1. Maintain existing standards for purchasing computers with Intel multicore processors, Intel or ASUS mainboards, front access usb and multimedia, RW optical drives, and non-proprietary chassis/power supply/
2. Maintain the minimum standard for supported computer hardware of PIII 1.0 GHz/384 Mb/20 GB.
3. Maintain an average computer age of 3 to 4 years
4. Investigate both the use of hardware terminal systems (NComputing) and Network Terminal systems (Citrix, MS Terminal Services, X2) and move into field testing and potential implementation.
5. Have interactive whiteboards in every classroom and a well-trained staff using them.
6. Increase the computer to student ratio to .75:1
7. Add additional peripherals that supplement the student generation of interactive content in the curriculum using web 2.0 such as digital cameras, camcorders, and audio recording peripherals.
8. Continue investigating and seeking funding for Kurzweil Educational Systems assistive technology

#### **How will we know we are getting there?**

Our technology purchasing process is very comprehensive and drives the evaluation, planning, procurement, and upgrading of technology. Advisory Committee input is key to ensuring that our technology is current and support the curriculum.

The Technology Department is a key resource in finding and evaluating new technology. By setting up bench tests in a simulated environment, the Technology Department is able to test both hardware and software, evaluate it based on effectiveness and cost, and make recommendations to instructors and administration. The Tech Dept staff finds new educational technology through journals, ETech Ohio, SOITA, and other professional organization memberships. Often, a teacher, parent, student, or advisory committee member may recommend technology for evaluation by the Technology Department.

The purchasing process begins with roundtable discussions held by Technology Committee members with career technical programs/academies, academic departments, administration, and administrative support staff. The initial roundtable occurs prior to the business advisory committee dinner and kickoff meeting. The initial roundtable is a review of technology inventory, methods of use, and integration into curriculum. Each instructor receives printed and electronic documentation of this data for the business advisory kickoff. The Data is then taken to the Business Advisory Committee for review and discussion. Advisory committee input is documented and the instructor then edits and submits any changes in the documentation to the Technology Coordinator for incorporation into the local Technology Plan. All staff is encouraged to discuss and to explore new ideas and concepts with the Technology Coordinator. Samples, trial versions, and bench testing often results.

The second roundtable actually kicks off the purchasing process. Programs/Academies and departments have evaluated curriculum, determined needs, and agreed upon technology requests for the coming fiscal year. Those requests are submitted online and include a rationale, description of use of the technology, and the training required to make the technology integration successful. The Technology Coordinator has the right to deny a request at this stage if the request is not feasible. All requests are discussed by the Technology Committee.

The Technology Coordinator then works with the Director to prioritize requests and examine the budget. The

requestor is given feedback online as the process continues. The requestor is asked to provide additional details to the director should questions arise. Once the final decision is made to determine what will be purchased, feedback is given to requestors so that they can plan for any necessary training and implementation the following year. All purchases are made at the turn of the fiscal year in bulk to ensure the deepest discounts possible and to adhere to the set timeline for purchasing.

Evaluation of items purchased comes through the staff evaluation process and through survey data. During evaluation, the Director makes note of new technology in the classroom and the effectiveness of its use. Staff also have the ability to give verbal feedback to the Technology Coordinator and to respond through surveys.

Upgrading of technology occurs and is reflected in the local Technology Plan. Minimum standards for supported equipment changes as upgrades take place. With our focus on career technical education, higher priority for age, reliability, and computing power is given to programs requiring computer technology such as Digital Design Tech Prep or Graphic Arts Tech Prep as well as to year round administrative support staff. Currently our weakest (oldest) computer technology is in the academic classrooms where use is typically limited to Internet research, word processing and preparation of presentations.

#### **How will we sustain focus and momentum?**

This technology plan, with the technology purchasing plan and timeline, does indeed ensure that we are future proofing and making smart decisions. With input from our business partners, students, parents, and teachers, in addition to the research conducted by the Technology department, WCCC ensures that the appropriate technology is planned for current and future academic integration. By purchasing in bulk at the turn of the fiscal year, the technology department has summer help to deploy new equipment and WCCC ensures the deepest discounts possible.

This technology plan outlines the target goals for future technology purchases and emerging technologies that have already been identified. This plan undergoes a three year revision with ETech Ohio for Erate. Additionally, a more comprehensive version of this plan that includes cut sheets, appendices, a glossary, etc is revised annually and approved by the local Board of Education. The local version of the technology plan contains all of the data/text in the ETech Ohio plan plus additional information specific to career tech education.

Warren County has the second largest growth percentage in Ohio. One of the WCCC strategic plan objectives focuses on increasing our market share of students. We anticipate growth and our Master Facilities plan is written provide a modern and future proof facility for our students. Technology is a key part of this plan and we are already in phase 1 of building and renovation. While we are under OSFC (Ohio School Facilities Commission) guidelines for technology for our building and renovation, the Technology Coordinator has worked as part of the core planning team, the architects, and the engineering firm to ensure that the technology introduced into the district ties in seamlessly with existing technology, but also prepares WCCC for the future.

### **4.3 Stakeholder Access to Educational Information & Applications**

1. **None:** Our organization does not have this type of electronic system. We maintain paper records.
2. **Minimal:** Our organization utilizes some electronic documents to manage these systems and processes such as spreadsheets or word processor.
3. **Adequate:** Our organization uses database software to manage these systems and documents.
4. **Advanced:** Our organization shares this type of information using industry-adopted data standards and practices (e.g. SIF, XML-Web Services or EDI).

#### **Tool**

	Where are we now?	Where do we want to go?
Student Information Services	3 - Adequate	4 - Advanced
Instructional Applications	3 - Adequate	4 - Advanced
Data Analysis & Reporting	2 - Minimal	4 - Advanced
Grade Book	4 - Advanced	4 - Advanced
Library Automation	3 - Adequate	4 - Advanced
Facilities Management	4 - Advanced	4 - Advanced
Voice Telephony	4 - Advanced	4 - Advanced
Human Resources & Financial Management	3 - Adequate	4 - Advanced
Network Account Management	3 - Adequate	4 - Advanced
Transportation	3 - Adequate	3 - Adequate
Food Services	3 - Adequate	3 - Adequate

### How will we get there?

One WCCC strategic objective is "all decisions will be data driven." Career technical students are shared with our partner districts and often associated to the partner district in state databases. DASL and D3A2 are examples. We do not have full access to data for 100% of our students in a timely manner. Student ID numbers are generated by our partner districts and they do have consistent practices on changing them. This makes SIF a non-factor for our district as we depend on DASL and the student ID as reported to the state by our partner districts.

WCCC has investigated and gone through fact finding on the building of a data reporting service. Our goal is to pull data daily out of DASL, EMIS, USAS, USPS, Point of Sale, and other individual databases into a central database with a secure online customizable reporting service and a quickview dashboard on vital student statistics such as attendance, graduation deficiencies, OGT scores etc. We have sought proposals from several vendors to develop this capability to date. Our long term goal is to convert this service into a data warehouse capable of tracking data over time, performing advanced analytics to find trends, and to make predictions based on data for the future. Dated student records have all been archived electronically.

Career Tech programs use a variety of application software as their labs are simulations of business. For example, our Cosmetology lab uses a package called Salon Manager, recommended by their advisory committee. Our academic classes also use software packages to enhance curriculum. Some of our curriculum is actually online or has online supplements. We have a limited number of actual simulators and it is our goal to pursue increased access to simulators. Of interest are additional heavy equipment simulators, driving and dispatch simulators for both Fire Science and Criminal Justice, and weapons simulators for Criminal Justice.

We are very satisfied with our online Gradebook, Progress Book. We can improve in our consistency with online reporting, lesson plans, and calendars for parent and student access.

Our media center coordinator does an excellent job teaching every student, through English class, how to use the media center and InfOhio. Student ID cards have bar codes to check out materials. Our new media center, opening fall of 2009, will have modern technology systems in place. We need to increase our printed and multimedia selections.

WCCC subscribes to Ohio Public School Works (OPSW) for Health and Safety, online training, IT Management, and Facilities Management. Through OPSW, both the Tech Dept and the Facilities Dept have an online reporting and ticketing system. Thus any user can report any problem that they see quickly and efficiently and the appropriate department has the ability to track previous instances and the actual fix. Both departments operate very efficiently.

Our VoIP system is state of the art and our staff uses it well.

WCCC is going through the process of converting forms to electronic format and automating the processing of forms. Part of this is being done through a vendor, Formshare, and the rest is being done in house using Sharepoint services (yes, the names are confusing for staff!) This process is helping the efficiency of Human Resources and the Treasurer. Online forms can be tracked and archived easily and provide instantaneous feedback to staff.

Currently all network account management is performed by Tech Dept staff. It is our goal to develop a secure online interface to allow the creation of accounts and the modification of group membership and passwords by key personnel without requiring access to server consoles.

Transportation is limited at WCCC and our services are adequate.

Our food service is contracted and our point of sale is Meals Plus (MP). MP will undergo an upgrade summer, 2009, which will put the database onto our SQL server.

### **How will we know we are getting there?**

Evaluation comes down to use, efficiency, and increased productivity. When WCCC moves forward with a central data reporting services, the administration team will have access in one location to all key indicators for our state report card, local report card, financial data, and strategic plan and will be able to track this data over time. The improvement over multiple sources of data with lack of data tracking over time will be instantly recognized as an improvement in efficiency and will help us, as a district, to make data driven decisions for continuous improvement. Teacher access to student data through this service and data involving their program or department will also improve their local efficiency and their global view of fit into the organization.

Educational software applications that we implement are evaluated by the instructor. This includes curriculum supplements and simulators. Naturally, students give feedback to the instructor. Instructor feedback reaches the technology department during roundtables and their immediate supervisor during observation/evaluation. Indicators are student engagement and assessment scores.

For Progress Book, one statistic we track is parent access online. It is important to WCCC that our parents stay involved in the success of their student(s). If we are not satisfied with the percentage of parents accessing their student's gradebook, we take action such as sending letters home or making an automated phone call using Community Safe. WCCC has discussed holding an open house to teach parents how to log into the gradebook and examine their student's progress.

Key indicators for our Media Center and our Facilities and IT Department are strictly numbers. Circulation numbers for the Media Center, and work order numbers and response times for Facilities and Technology.

The development of online forms, their dissemination on Sharepoint, and the use of electronic transfer of applicable forms makes for a more efficient process that is environmentally friendly. As each form is migrated to electronic format, the paper versions will be discarded.

When our intranet is enhanced with secure, online, scripted access to user accounts for select staff, the number of interruptions to the technology department will diminish as will the delay for staff and students forgetting their password or needing a new account. This will greatly improve efficiency.

Obviously in exploring and planning to implement a centralized data reporting service, WCCC is prepared to expand its use of SQL Server. This will include Meals Plus summer 2009 and Sharepoint services. Our goal is to get as many databases onto a single server so that backup routines are streamlined which will improve efficiency. We are also in the process of virtualizing many of our servers to save electricity, to have high availability through redundant physicals serving virtuals, and to streamline backups and improve efficiency.

### **How will we sustain the focus and momentum?**

The Technology Department and the Administration Team is proactively pursuing the use and availability of data to drive decision making. While we are under phase 1 of construction/renovation, it is easy to projects such as these on the back burner. To sustain focus and momentum, the technology department will continue to research, migrate databases to SQL, and stay in contact with vendors regarding the potential implementation of a data reporting service.

In terms of software use and development, research, trial copies, and interaction with software companies is essential to maintaining awareness of availability and performance of applications and simulators. The business advisory committee drives the momentum, however, it is not unusual for the concept to begin with the Technology Committee or the teacher before it goes to the advisory committee.

With regard to online systems for the media center, the coordinator is dealing with students and has their best interest at heart. If a student does not have their ID card, she looks them up in the system and checks

materials out for them. This cannot change. She does encourage them to bring their card in next time. For facilities and technology, our departmental staff has been well trained to ask staff to submit an online work order rather than respond to impromptu requests unless there is an emergency. Taking this approach is in fact conditioning the entire staff and improving the data, documentation, and efficiency of our departments.

WCCC technology staff will continue to attend conferences, webinars, take classes, and read books and journals to ensure that they are remaining current in the field and are driving positive change in access/use of data and software applications for all staff members.

## 4.4 Educational Software

**Never** - When selecting educational software, this process never occurs.

**Rarely** - When selecting educational software, occasionally this process is followed.

**Sometimes** - When selecting educational software, we typically follow and/or incorporate this process.

**Always** - When selecting educational software, this process is always followed and/or incorporated.

### Selection Processes

	Where are we now?	Where do we want to go?
Requirements gathering, feature/fit analysis to goal	Always	Always
Professional development planning for end users and support personnel	Always	Always
Criteria for evaluation developed - including alignment to ACS and curriculum	Always	Always
Evaluation of demo copies	Sometimes	Always
Implementation pilots	Sometimes	Always
Replacement cycle (upgrade, retire, new)	Always	Always
System requirements / technical and operational support	Always	Always

### How will we get there?

At the infrastructure level, WCCC holds a Microsoft School Agreement, which essentially involves annual leasing of rights to use Office, operating system, core client access rights, and servers packages. Currently the minimum Office standard for WCCC is Office 2007 for PCs and Office 2008 for MACs. Operating systems are Windows XP Professional and Windows Vista Business. Without getting into infrastructure services, Microsoft Office is a primary tool used by all students and staff for word processing, presentations, spreadsheet, and database. There is no desire to change our School Agreement with Microsoft.

Currently, WCCC holds an Adobe Education License Agreement for Creative Suite Design Premium 4. This package is used for our Graphic Arts and Digital Design programs and is installed on all staff computers providing access to Adobe Photoshop for graphic editing and Acrobat professional for editing and converting PDF files. It should be noted that our networked copiers have the ability to scan to email any document in graphic, text, or combination mode as a PDF file so that a printed document can be converted to digital format. For fall of 2009-2010, it is targeted to purchase another 500 seats of Creative Suite 4 Basic for installation on student computers and public computer labs so that Photoshop and Acrobat Professional are available to all students. Currently, a site license exists for Macromedia Suite 8 which provides Fireworks for graphic editing for students.

As such, every computer students have access to will provide a modern operating system (OSX Tiger or Leopard for MACs), Microsoft Office 2007, a graphics editing package, and Internet access. This is the base installation.

Certain education software packages are renewed annually such as Shop Keys for Automotive Programs. Some packages are purchased in conjunction with textbooks to supplement the Board approved curriculum such as Automated Accounting, Salon Manager, Geometer's Sketchpad, etc. WCCC ensures that all software purchases for supplements to curriculum have been reviewed by the business advisory, demoed by staff, and validated against the ACS and the curriculum prior to approval for purchase. The replacement cycle for these software packages follows the replacement cycle for the computers the software operates on and/or the curriculum review process. Some software packages are the actual Board approved curriculum such as Ford PASS for Auto Mechanics, Cisco Network Academy for Information Technology, Pivot Point for Cosmetology, ICar for Auto Collision, Princeton Review for Gateway to College, Plato for Gateway to Success, Final Cut Studio for Digital

Design, etc. Simulators undergo a rigorous process of demo and testing, Advisory Committee review, and Administration review to crosscheck curriculum and ACS standards. Currently WCCC has two simulators: CAT Software Excavator for our Heavy Equipment program and ITI Bank Teller Software provided by National Bank and Trust for our Financial Services program.

The need for new software always comes from the curriculum which requires Advisory Committee approval prior to Board approval. The purchasing process requires Technology Coordinator involvement in planning and approval which guarantees demo evaluation and validation of system requirements, necessary professional development for staff, and technology/operational support.

For wide scale deployments, such as Microsoft Live@edu, a test pilot is always used. This is conducted by the Technology Department with a selected class or program. The Administration team is always involved in determining the need for a pilot and targeting the class or program to perform the pilot.

#### **How will we know we are getting there?**

The bottom line for evaluating educational software is the alignment with the curriculum. The teacher must demonstrate that the software supports and compliments the student performance objectives in the curriculum document as determined by the Director of Curriculum and the Advisory Board. Finally, the rationale, implementation plan, and professional development plan must be including in the Request for Technology which is screened by the Technology Coordinator, the Technology Committee, and the Director.

Once staff is trained and software is implemented, the evaluation process conducted by the Administration Team examines the use and effectiveness of the software through observation, teacher goals, and teacher review.

#### **How will we sustain focus and momentum?**

The number of phone calls and emails received from software vendors can get very annoying. However, the content of those interactions can be very beneficial because the vendor often wants to inform the district of new and innovative products. Therefore, all vendor initiated contact is met with a smile and cordial disposition.

ETech Ohio is an extremely valuable resource with relevant Education Technology professional development offerings, the annual technology conference, the technology coordinator listserve, and information posted on the website. WCCC needs to take greater advantage of professional development opportunities with ETech Ohio both by Technology Department staff and teaching staff. Keeping in touch with other technology coordinators through the listserve is an invaluable resource - it allows us to share both tribulation and success stories involving hardware, software, and peripherals. Most vendor contact comes from the ETech Ohio Technology Conference - by interacting with vendors on the floor, gathering materials, and following up with phone calls, WCCC stays in tune with developments and potential products to enhance and supplement curriculum and student learning.

The Microsoft School Agreement, Adobe Agreements, Anti-virus agreements, etc are built in costs for the Technology Coordinator's budget. Annual subscription renewals, such as Shop Keys, are built into the coresponding program budget annually as are software packages that serve as the curriculum itself such as Plato. During the purchasing process, Total Cost of Ownership (TCO) is evaluated as these packages are renewed and new/replacement supplemental software is evaluated for approval/rejection by the Director, Technology Coordinator, and Curriculum Director. The purchasing process begins with one dollar amount dedicated to software. Dollars are then moved into program budgets as requests for software are prioritized and approved.

WCCC momentum with educational software will be sustained by research, innovation, professional development, and support. A Technology Department excited about the opportunities software makes available for students spills into professional development activities for staff. Staff excitement translates into a fun and rewarding learning environment for students.

## **4.5 Security**

1. **None:** Organization does not have any of these policies or securities in place.
2. **Minimal:** The basic functions are present, but not all layers are addressed.
3. **Adequate:** The basic functions are present and all layers are addressed and integrated.
4. **Advanced:** The basic functions are present, all layers are addressed and integrated, and proactive monitoring with security response and forensic log analysis procedures are in place.

	Where are we now?	Where do we want to go?
AUP (Acceptable Use Policy)	Yes	Yes
User Account management and network authentication policies	4 - Advanced	4 - Advanced
Security zones	4 - Advanced	4 - Advanced
Wireless network security policies	3 - Adequate	4 - Advanced
Central log mechanism and review policy	2 - Minimal	4 - Advanced
Incident response procedures	4 - Advanced	4 - Advanced
Network security	3 - Adequate	4 - Advanced
Host Security	3 - Adequate	4 - Advanced
Data security / integrity	3 - Adequate	4 - Advanced
Anti-virus software	4 - Advanced	4 - Advanced
Spyware	4 - Advanced	4 - Advanced
Firewall	4 - Advanced	4 - Advanced
Filtering	4 - Advanced	4 - Advanced

### How will we get there?

The local copy of the Technology Plan includes the Acceptable Use Policy (AUP). All staff must electronically sign off on the policy through Ohio Public School works annually. The policy is included in the student handbook and students and their parent/guardian are required to sign off on the policy. If a student or staff member is suspected of violating the policy, an investigation is required. If the suspected violation is contained in house, the Technology Department team will gather facts and present data to the Director who may issue discipline. If a violation involves law enforcement requiring complete access to data pertaining to the staff member or student, WCCC will hire an impartial third party to perform a forensic image of that data for law enforcement officials.

User accounts are the responsibility of the Technology department. Staff account requests come from Human Resources, student account requests come from the Assistant Director. It is a goal to create a secure intranet site that allows for the creation/disabling of accounts and changing/databasing of passwords. WCCC has an integrated circuit video surveillance system with interior and exterior cameras. This system compliments a motion detector system for illegal entry. The video system is monitored over a network connection by the Director, Assistant Directors, and the district resource officer from the Sherriff's Department. This system is zoned for labs, exterior PTZ, and hallways.

Our wireless network is currently secured with WPA Personal 2. We have four labs which use wireless laptop technology using Cisco/Linksys Business class access points and unique SSID's. The campus wide wireless has a single SSID, roaming, and is driven by Cisco Aeronet standalone operating systems. It is desired following phase 1 renovation to convert these access points to lightweight operating systems to tie into a new Cisco wireless controller so that there is a single configuration location. It is also desired to expand coverage, bandwidth, and to integrate security with Active Directory using Microsoft PEAP. Staff are not given the encryption key, it is currently required of the Technology Department to change the key and all of the technology that uses it. Active Directory integration will authenticate users reducing the workload on the Technology Department significantly. WCCC is in year three of a three year license with Sophos for antivirus and personal firewall. Antivirus software will be evaluated for purchase summer of 2009. Evaluation components include resource load, enterprise management, effectiveness, spyware removal, and ease of conversion.

WCCC relies on their ITC for exterior firewall, SPAM, mail malware, and Internet filtering. Exterior filtering is done with Cisco PIX firewall technology to secure live IP addresses and prevent intrusion. Web filtering is done by an 8e6 R3000 appliance. The Technology Department has control of the filtering policies for the WCCC subnet. The base filtering policy is fully CIPA compliant and the Technology Department has added filtering of URLs, wildcard URLs, search engine keywords, and URL keywords to eliminate browsing to unproductive sites such as gaming sites. The 8e6 is also very effective at stopping anonymous web proxies. The ITC also provides Mail Marshall email filtering for virus and malware and Sophos email filtering for SPAM. Currently, these services are very effective. Email archiving will be implemented using EMC Mail Archiver by Jan 1, 2009. The email retention policy for WCCC will be five years.

Currently, centralized logging is only available through Active Directory and logging of "interesting" traffic through the 8e6 filter appliance. It is a goal of the Technology Department to implement a Microsoft ISA proxy to log all internet traffic. Computer hosts themselves are secured through comprehensive group policy and registry

settings. Teachers have few restric

### **How will we know we are getting there?**

The AUP is reviewed annually by the Technology Committee and the Administration Team. Changes in technology dictate changes in policy. Implementation of Microsoft Live@edu will be another example of such change. The AUP is Board policy. Any changes undergo review by legal counsel.

Staff user accounts are created/disabled upon request from the Director of Human Resources. The request will indicate the level of account access in terms of computer logon, network storage, email, etc. Staff accounts are not deleted unless they have been inactive for a period of 5 years.

Student user accounts are created/disabled upon request from the Assistant Director. When a student is enrolled in the district, the Assistant Director issues a DASL page to the Technology Coordinator indicating a student's status as new, withdrawn, transferred, etc. Student accounts are organized by their year of graduation. Student accounts and network data are disabled, not deleted, until 6 months after the graduation date.

The ITC holds periodic security audits. A recent security audit exposed clear text transfer of logon information on our PDEExpress server which has since been converted to https access only. All other exposed servers passed the audit. The ITC also provides security monitoring and intrusion detection. If the ITC sees an abnormal condition, they notify the Technology Coordinator to take action. Indicators for the success of the 8e6 are reports from teachers, incidence reports requiring discipline of students or staff, and log files for the 8e6 in terms the quantity of "interesting" traffic. The Technology Department has the ability to issue an override to the filter, but has only elected to do so for the district Resource Office so that he can conduct investigations for cyber bullying and/or other content involved in investigations. The Technology Department has the capability of enhancing SPAM filtering in Exchange, but this has not been necessary to date. Should complaints of SPAM become a problem, this action may be taken.

Implementation of Microsoft ISA as a web proxy will be a key indicator and the information taken from logs will further allow WCCC to analyze Internet traffic patterns beyond what the 8e6 finds "interesting". This will also make drill-down time more efficient should an incident arise.

The key indicator in the success of our security implementations is the number of incidences. Over the past three years, incidences have been minimal and minor in nature. Thus, overall, it is the view of the Technology Committee that our network and user security measures are effective. Should an increase in incidences be observed, it is the responsibility of the TEchnology Coordinator to determine the cause and efficiently find a solution that is cost effective and well researched. WCCC takes a proactive stance with security hoping to stop the potential for incidents before they occur.

### **How will we sustain the focus and momentum?**

The AUP is key. Staff must complete online training regarding the AUP annually and electronically sign off on it. They in turn cover the AUP with students from the student handbook at the beginning of each school year.

The use of Sharepoint services for our intranet/extranet is effective for publishing snippets of policy and inform staff of potential threats or changes in filtering.

Technology Committee roundtables are also effective in information sharing with Security information passing to teachers. Teachers also pass issues or breaches they have observed back to the committee or directly to the Technology Coordinator.

WCCC recognizes the exponential growth in threats and the impossibility of staying on top of threats internally. We are comfortable with our reliance on our ITC to provide filtering and protection for our network. With a new Erate Form 470 for FY09 putting Internet Services out to bid, our Criteria for accepting services is 25% cost, 10% Ease of Transition, 25% Filtering capability, 15% Remote Access capability, and 25% Reliability. Should our bid critia worksheet dictate changing our Internet service provider, the WCCC technology department recognizes there may be a need to add security measures in house. If that should occur prior to implementation of Microsoft ISA server, a firewall unit and web filter may become a necessary purchase.

The WCCC Tech Dept staff will continue to talk to vendors and stay up to date regarding security products, threats, and proactive measures. One of the professional journals that we receive is Security magazine. The Tech Dept is ready and willing to demo appliances as part of their research. Should the need for implementation

of further security measures become necessary, the Technology Department will be prepared to take efficient action.

## 4.6 Technology Support and Management

### Support Ratios (1:n)

	Where are we now? (1:n)	Where do we want to go? (1:n)
Support Staff to Students	1:348	1:250
Support Staff to Teachers	1:27	1:20
Support Staff to Computers	1:220	1:200
Support Staff to Buildings	1:3.33	1:2.5

	Where are we now?	Where do we want to go?
Average Response Time (Days)	3	1
Service Level Agreement (SLA)	Yes	Yes
Full-time technology coordinator/director	Yes	Yes

### How will we get there?

The ratios provided above for students, teachers, computers, and building pertain to secondary teachers and students and the computers that they have access to only. These ratios do include facilities staff/computers, administrative support staff/computers, or administration staff/computers.

The Technology Department is currently a three member staff. The Technology Coordinator is responsible for Administrative functions including policy, regular administration meetings, strategic planning, reporting to the Board of Education, technology planning and procedures, scheduling, staff professional development, and evaluation. The technical expertise of the current Technology Coordinator lies in Cisco and Microsoft networking, education, servers, VoIP telephony, security, data backup, and computer systems support. The Systems Specialist role is server development and implementation, client side support, server upgrades and migration, data storage and backup, scripting, programming, database, and web development. The technical expertise of the current Systems Specialist is Microsoft networking and servers, Cisco networking, programming in .net framework, scripting and automation, server virtualization, database, security, and computer systems support. The Computer/Network Technician role is end user support. The technical expertise of the current Computer/Network Technician is Apple hardware and operating systems support, Apple OSX Server, PC systems support, multimedia hardware/software, operating systems, and physical layer networking. All three Technology Department staff members are educated in their field, have excellent communication skills, and learn quickly and efficiently. While all three members of the Department have their primary focus and unique expertise, they work efficiently as a team and all three members are ready and willing to ensure good service and quick response to trouble tickets as they are received.

WCCC is a career technical high school with satellite programs in partner districts. The technology department does not provide support to satellite programs beyond the program classroom (no infrastructure support). The satellite programs drive the support staff to student and the support staff to building ratios up. Unlike a comprehensive district where buildings supported are within a couple of miles of one another, our geographic spread is 23 miles from our northernmost partner school to our southernmost partner school. In addition to our partner schools who are connected to us through our ITC, we have programs at Miami University Middletown (Gateway to Success), Fenwick High School (Gateway to College), Otterbein Retirement Community (Project Search), the Warren County Airport (Aviation Technology), and the Warren County Humane Society (Veterinary Science). The impact of travel time and mileage is cumbersome on the Technology Department. If a 15 mile trip must be made to diagnose a problem that requires parts, the trip does not solve the problem and additional trips must be made. If the Computer/Network Technician is on the road, the Systems Specialist is in the middle of a critical server operation, and the Technology Coordinator is in an Administrative function, there is no support left for staff. This is also the case anytime a vacation, personal, or sick leave day is used by a Technology Department staff member.

WCCC anticipates an increase in the number of satellite programs. Satellite programs currently exist in four of our six partner school districts. Most satellite programs require a full computer lab, although some labs are smaller than standard size (10-20 computers). While the potential number of increased locations is only two, the

time on the road for Technology Department staff increases significantly with every new satellite program. Additional Technology Department staff may be considered to provide consistent service to all locations.

#### **How will we know we are getting there?**

The Technology Department publishes surveys for staff regarding professional development and satisfaction. Additionally, the district Are We Making Progress survey includes data on Technology systems and service. Staff input to their supervisors reaches the Administration team and if issues regarding technology impairing the education process are made known, they are dealt with immediately. There is no excuse with all of the checks and balances in place for professional development program, communication tools, and the planning and purchasing plan for technology systems to ever be a hindrance to education unless there is an unavoidable calamity - and the Technology Department always gives top priority to emergency situations.

It is the responsibility of the Technology Coordinator to build into the annual Technology budget funds for repair and purchased services. Should there be an immediate need beyond the ability of the Tech Dept to respond, external support will be called in. At the close of the purchasing plan, the Technology Coordinator knows the scope of summer work to prepare for the coming school year. It is his responsibility to use purchased services money to employ summer help. In the past, a single Information Technology Tech Prep student has been hired for a paid internship to assist with prep work and deployment.

Use of Ohio Public School Works as the online IT service order system has greatly improved the tracking and efficiency of the Technology Department. The data on response time from opening of ticket to closing of ticket is valuable. The tracking of issues and the database of their solution is also valuable.

Finally, the Technology Committee has a representative from every department in the district. This committee steers technology decision making for the district and serves as another vehicle for the staff to provide input and feedback. If there is a problem and a staff member is unhappy, it will be discussed in detail at the next Technology Committee meeting.

#### **How will we sustain focus and momentum?**

WCCC will monitor the following pieces of data:

- Average ticket response time
- Average ticket resolution time
- Tech Dept staff to computer ratio
- Tech Dept staff to location ratio
- Tech Dept mileage used
- Tech Dept time spent off the main campus
- Funds spent on purchased services

If any of these indicators becomes an issue, it is the responsibility of the Technology Coordinator and the Curriculum Director to determine the cause, formulate a solution, and present it to the Superintendent. Solutions may be additional staffing, re-organization of the Technolgoey Department, or negative evaluation with an action plan for a Technology Department staff member.

The Technology Plan mission and vision clearly dictate that we are here for student. Our mission is one of service. Our Department works well as a team and our vision and mission are reinforced daily in our office and workroom.

## **4.7 Total Cost of Ownership**

**None** - This factor is not accounted for in the cost analysis.

**Some** - This factor has cursory consideration but is not a primary decision driver.

**More** - There is deliberate consideration for this factor, but it may not always be a primary decision driver.

**Extensive** - This factor is always considered in cost analysis and is a primary decision driver.

#### **Process**

	Where are we now?	Where do we want to go?
Vendor Relationships	More	More
Procurement Plan	Extensive	Extensive
Specifications/Requirements/Fits Analysis	Extensive	Extensive
Integration of donated time, materials or services	Some	More
Deployment/Installation plan	Extensive	Extensive
Initial Training and Professional Development	More	Extensive
Evaluation of current external support costs versus new purchase	Extensive	Extensive
Loss of institutional knowledge for replaced systems	Some	Some
Phase Out/Replacement cycle	Extensive	Extensive
Disposal costs	Some	Some

### How will we get there?

You cannot help but make excellent relationships with vendors you trust and like to work with. That said, WCCC is a public organization and has a responsibility to consider all vendor proposals at the time of purchase. While there is deliberate consideration for vendors, sometimes tied to existing contracts such as Embarq for Telephony, Xerox for copiers, etc, standards play a more essential role in TCO. It should also be noted that WCCC always gives local vendors the opportunity to place bids.

Standards play a key role in procurement. Our printers, peripherals, computer components, servers, cameras, camcorders, dvd decks, etc are all standardized. Through the purchasing process, TCO is examined for initial purchase, maintenance, professional development for staff, repair, replacement, and disposal at end of life.

These factors are weighed in the decision to purchase or reject a technology request and are included in budgeting for the life expectancy of the item.

Naturally during the planning stages of the purchasing process, specifications for the item and hardware/software requirements are analyzed to determine feasibility. If the item requires major installation, such as an interactive whiteboard, the Facilities Maintenance department is consulted. If necessary, a third party vendor may be consulted. WCCC is fortunate to have an electrician as part of an excellent maintenance staff and the Technology Department works closely with them. These factors are all built into the TCO and play a significant role in the decision to accept or reject a request for technology.

Deployment, installation, and training are all part of the purchasing plan outlined previously in this document.

Staff must submit a rationale and plan for integrating technology that includes professional development required in their request for technology. These factors are all built into the TCO for every item purchased.

Currently, the Technology Dept uses very little external support. As a Department, pride is taken on handling any job. However, for installation, sometimes it is not only desired but necessary to consider an external vendor.

This is often the case for extensive interior cabling or exterior wiring. These costs are always considered in the TCO for purchasing decisions.

WCCC has a well-planned phase out program with priority given for new hardware to those career technical programs needed state of the art equipment and their older (new to most) handed down and redistributed. When it is time to scrap, a certified recycling company is brought in. WCCC use to pay for recycling technology items.

Today, there are several companies in Ohio that will come to our site, pick up skids of retired technology, shred the technology, and issue a certificate of proper disposal under EPA guidelines. WCCC takes full advantage of this with recycling pickup occurring in the summer. The company we currently engage for recycling is ITScrap.

Battery recycling is done at the time of battery replacement an our vendor is Batteries Plus with a local store within 15 minutes. We take our old batteries to them for proper recycle under EPA guidelines and pick up replacement batteries. For both technology retirement recycling and battery recycling, no additional money is added to our TCO.

### How will we know we are getting there?

The Treasurer's office maintains a five year forecast which is revised twice per year. This forecast determines the financial health of the district. New programming is discussed in Administration meetings early in the year and potential for new programming is built into the five year forecast and the budgeting process. The treasurer gives the Administration team an idea, as compared to last year's budget, the percentage of increase/decrease to anticipate for the following fiscal year long before the technology requests for technology are received in the technology purchasing process.

The Technology Coordinator's annual budget targets infrastructure and technology for Administration, Administrative Support, and Facilities staff. The Director receives a budget for equipment, supplies, and software for education programs and departments. The Technology Coordinator can use budgeted money to support technology costs for programs and departments by transferring money into the Directors budget for that program or department. This is all coordinated and done during the purchasing process. As the Director and the Technology Coordinator collaborate, they examine ongoing costs, pre-established costs, renewal costs, installation costs, maintenance costs, professional development costs, and potential third party support costs in addition to the life expectancy of the item. Data examined includes the amount of money spent on the program/department over time, past purchases, and future needs. These factors are all considered as requests for technology are prioritized and either accepted or rejected.

Repair and maintenance costs for technology are tracked in by line item in the Technology Coordinator's budget. This data is used to factor into the TCO for future purchases.

#### **How will we sustain focus and momentum?**

It has taken WCCC a while to hammer down an effective technology purchasing plan and we feel we have a really good system in place that is staff driven, involves advisory committee input, and puts student learning first. We are one year into implementation of the plan. As with all new processes, there are bumps in the road. The main obstacle for the first year was staff understanding that the process was final (there would be no technology requests the assigned deadline). Another obstacle was unexpected, unbudgeted needs that have cropped up during the year. These obstacles have been very minor and the system will continue to smooth out with time.

The key to TCO for WCCC is purchasing and implementation standards. This requires dedication for a manufacturer's product, not a vendor's offering. WCCC is currently standardized to Intel motherboards and processors, HP printers, Xerox copiers, Cisco Telephony and network switches, Canon digital cameras and camcorders, and Smart Technology interactive Whiteboards. With a six year anticipated lifespan of computer equipment and the typical warranty period of three years for parts, it is the position of the Technology Department that no proprietary equipment, other than Apple Macintosh for Digital Design and Graphic Arts, be purchased new. This includes the computer power supply, chassis, interior cabling, drives, and mainboards. By adhering to these standards, WCCC is committing to manufacturers, not to vendors allowing the purchasing of equipment to be easily estimated. This also allows WCCC to take multiple bids for bulk purchasing and to acquire the best deal and warranty possible. The most important benefit to the Technology Department is the ability to purchase replacement parts beyond the three year warranty from any vendor rather than from a proprietary vendor/manufacturer. With the sputtering economy and more vendors filing bankruptcy, it is reassuring to not be locked into a vendor for purchase, warranty, and support.

WCCC has purchased off-lease equipment at highly discounted rates in the past. The failure rate of off-lease equipment is low and the warranty period is one year. Off-lease equipment offers the ability to quickly inject newer technology where immediate needs exist. WCCC will continue to purchase off-lease equipment as necessary to meet budgetary requirements. The downside of off-lease equipment is its typical proprietary nature.

Should repair, maintenance, and purchasing costs go significantly beyond budgeted amounts under our purchasing plan, the Director and Technology Coordinator will be forced to re-examine the TCO. This would include looking at the equipment being purchased, the associated warranty purchased, the cost of salaries for maintenance and repair, and an alternative of leasing equipment and contracting maintenance and repair.

## Budget and Planning

### 5.0 Budget

Sound budgeting is important for your technology plan; not only to project future spending and funding, but also to meet requirements for various private, state and federal funding opportunities. It is recommended that a representative from your treasurer's office be involved in completing this phase.

	Where are we now?	Where do we want to go?			
	Current Fiscal Year	2009-10	2010-11	2011-12	Total
Network/Telecommunications Services	68,000	68,000	68,000	68,000	204,000
Hardware	150,320	361,650	220,500	220,500	802,650
Student Data Administrative Systems	25,000	25,000	25,000	25,000	75,000
Software	145,000	123,500	102,000	102,000	327,500
Security	20,000	20,000	20,000	20,000	60,000
Technology Staffing/Support	208,422	212,590	216,842	221,179	650,611
Professional Development	12,600	14,500	14,500	14,500	43,500
Consumables	18,000	20,000	20,000	20,000	60,000
Additional	102,100	38,300	38,300	38,300	114,900
<b>Total</b>	<b>749,442</b>	<b>883,540</b>	<b>725,142</b>	<b>729,479</b>	

#### Additional Items

Repair and Maintenance: \$20,000

Travel/Mileage, Tech Dept: \$ 2,500

Purchased Services: \$15,000

Membership Fees: \$ 500

*Provide details about your budget process. How did your committee gather this data? Have you included spending amounts for planned future technology hardware, software, professional development, or other services?*

The WCCC Technology Coordinator has different budget line items than shown above. Budget information is available through Fiscweb online for the Technology Department. The following line items are mapped from the WCCC budget and the ETech Ohio Budget:

WCCC    ETech

423 – Maintenance and Repair    Other

432 – Professional Development, Certified Professional Development

434 – Professional Development, Classified Professional Development

439 – Travel/Mileage    Other

490 – Purchased Services    Other

510 – Supplies    Consumables

516 – Software    Software

640 – Equipment    Hardware

841 – Membership    Other

General Fund    Network/Telecommunications

Payroll    Tech Staffing and Support

There is overlap with the above line items and the WCCC Director, and Facilities Director's budgets. WCCC Director's budget includes Equipment and Software which is planned for and budgeted with the Technology Coordinator. Hardware/software purchases are approved from either of the Director's budget, the Technology Coordinator's budget, or a combination of the two. The Facilities Director handles budgeting for the video surveillance and the motion sensor security systems with the Technology Department offering support, services, and planning.

Spending for 2009-2010 is significantly higher for several reasons: Phase 1 of building/renovations under the Master Facilities Plan adds additional expense in the area of hardware; The purchase of a Storage Area Network with 1 year deferred payment is another major expense in hardware; renewal of Antivirus and the purchase of another Adobe Creative Suite Site License added expense to software.

The number of computers has increased at WCCC and with that the cost of software licensing, infrastructure equipment, and supplies. The following line item expenses are anticipated and budgeted for annually:

- Infrastructure Connectivity
- Infrastructure Servers and Storage
- Microsoft School Agreement
- Laptop and UPS Batteries
- Plato Online Curriculum
- Princeton Review Online Curriculum
- Compass Assessment
- Computer Replacement (150 for 6 year cycle)
- New Programs
- Interactive Whiteboards
- Peripherals
- Printers

#### **How will we get there?**

WCCC receives state dollars per student Full Time Equivalent units (FTE). As a career technical district, WCCC also receives weighted funding (state dollars) for equipment purchased for a Career Technical Program. Weighted funding is why money from the Technology Coordinator's budget may be transferred into the Director's budget for a career technical program. An example of this would be computer replacement (phase in/phase out) planned by the Technology Coordinator that impacts a career technical laboratory such as Business Technology Tech Prep. State revenues fluctuate from year to year and school districts always feel the pinch from state budget cuts. It has already been indicated that a 10% cut could occur for 2009-2010.

WCCC also receives local dollars from the Warren County tax base. Some townships in the county border or belong to other career technical districts and as a result, our voted annual tax mill rate ranges from 1.93 to 4.5 per assessed value. However, state legislation puts a cap of 2 mill on all local career technical district tax rates. WCCC will be funding phase 1 of the Master Facilities plan building and renovations without taxpayer aid and is considering a 1 mill permanent improvement (PI) levy. Funds from a PI levy can be used for equipment with 5 year or greater lifespan and are considered separate from the 2 mill cap on local revenue. Warren County is the second fastest growing county in Ohio and local revenue increases. The majority of the WCCC operating funds comes from local revenue.

WCCC does receive Federal grant money, the largest being Perkins funds for career technical education. There are several smaller federal and state grants including ETech Ohio's K-12 Network and Professional Development grants. These grants are not guaranteed sources of income.

WCCC does not receive private or business partnership dollars. WCCC does accept donations.

Warren County is an urban county and the Career Center does not qualify for ERate level 2 funding. Our free and reduced lunch enrollment has placed us in the 50% reimbursement category for Internet and Telephony services.

## Appendix A - Additional Documents

Description	Name	Date Submitted
District Software Selection Committee Guide	SoftwareSelection.pdf	June 21, 2006