



Educational Technology Plan for West Muskingum Local SD -048884

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2014-2015

2015-2016

2016-2017

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Goal:21st Century Skills Professional Development

Goal Description

Provide professional development for our teachers in 21st Century Skills, classroom technology instructional devices and strategies to use technology for personalized learning. Another key goal is being able to effectively analyze the data obtained from personalized learning environments to inform instruction.

Supporting Strategy

Use multiple teacher in-service sessions(1 hr after school meeting, PD day) each school year to personalize teacher learning and reinforce the concepts of 21st Century Skills, data analysis and provide exposure and training on current and emerging classroom instructional technology. Learning Walks to learn how other teachers within their content area use technology in their classrooms. Develop strategies for the use of technology for personalized learning for students.

Needs Assessment

Our students and teachers continue to grow using 21st Century skills in their daily instructional practices to provide opportunities to contribute to the knowledge through content creation and collaboration and data analysis for informed instruction. Our teachers need to be better informed of emerging technologies and receive greater support to assist them in effectively and consistently using technology. Teachers also need to be comfortable in training students how to use the technology.

Professional Development

Methods/Format

Various methods and formats will be utilized to offer flexible/personalized learning environments such as face to face instruction, hands on workshops, video on demand attending conferences, social networking and breakout sessions during PD days.

How to Measure

The effectiveness of the professional development will be measured by attendance, participation and the integration of technology into their daily instruction using a newly developed integration review rubric.

Support Goal

The primary goal is to provide teachers with exposure and training on 21st Century Skills, classroom technology instructional devices and their effective use and effectively analyzing data informed instruction. The secondary goal is to provide the knowledge to teachers so that they can comfortably and effectively train students how to use the technology.

Positions Involved

Superintendent
Curriculum Coordinator

Principal
Tech Coordinator/Director

Assistant Principal
Teacher Development Network

Evaluation

The success of this goal will be apparent when teachers perform teacher-run technology breakout sessions during District Wide PD Days. Peer technology training during planning times upon request. To further develop opportunities for professional develop a centralized resource to provide sharing and posting of videos and instructions developed by teachers will be created.

Description

Professional development for teachers will be deemed successful when they are able to take the information learned and provide meaningful and thorough instruction to their fellow teachers and peers. This process will allow educators to be trained by peers in a user friendly environment in a manner that ensures mastery.

Outcome

Teachers and or participants will be able to implement and use ideas upon leaving.

Positions Involved

Superintendent
Curriculum Coordinator

Principal
Tech Coordinator/Director

Assistant Principal
Teacher Development Network

Goal: 21st Century Personalized Learning

Goal Description

Provide every student with a personalized learning environment and pathway to become college and career ready in an academic curriculum aligned to the Common Core State Standards where technology is fully embedded. Provide students with the knowledge of how to use technology as a tool to manage complexity, solve problems and to think critically, creatively and systematically. Provide teachers with the tools and support to expand personalized learning in their classroom or team by creating original content.

Supporting Strategy

Continue to use blended learning software to gather data to inform classroom instruction and to enable personalized digital learning. Provide opportunities and choices for students to use different methods to creatively present their level of understanding and to take ownership of their projects. Students will become active users of technology by accessing, managing, integrating, evaluating, creating and communicating digitally. Students will use technology to enhance performance and personal development and will do so in a responsible manner as good citizens of the digital environment. With the addition of a learning management system students will be provided with an environment much like they will be exposed to in college and teachers will have the tools to better monitor their students growth and progress. Provide teachers with the tools and support to expand personalized learning in their classroom or team by creating original content.

Needs Assessment

Our students in K-8 use personalized learning software on a regular basis to inform instruction and enable digital personalized instruction. Teachers use classroom instructional technology to clarify concepts and instruction. Students use classroom technology to demonstrate their understanding. Our students in 9-12 use technology to perform research and for word processing primarily. Teachers primarily view technology as an add on and not as an embedded tool. Students use technology as consumers and very little in creatively producing works. The need for devices is high as access to technology is limited to using it mainly for the blended personalized learning and little for project based work.

Professional Development

Methods/Format

Various methods and formats will be utilized to offer flexible/personalized learning environments such as face to face instruction, hands on workshops, video on demand attending conferences, social networking and breakout sessions during PD days.

How to Measure

The effectiveness of the professional development will be measured by attendance, participation and the facilitation of technology as a tool for students to demonstrate their understanding through expression and creativity.

Support Goal

The primary goal is to provide teachers with the comfort level and skills to facilitate technology as a tool in their classroom. To allow students to use technology to manage complexity, solve problems and to think critically, creatively and systematically. The secondary goal is to provide the tools and skills for teachers to assist in the analyzing of data for informed instruction, growth and progress monitoring.

Positions Involved

Superintendent	Principal	Assistant Principal
Curriculum Coordinator	Tech Coordinator/Director	Teacher Development Network

Evaluation

Data from blended personalized learning software and learning management systems. Quality and variety of student work to demonstrate understanding. Utilizing technology daily in the classroom as a tool to support learning.

Description

Students are showing projected growth and progress and are taking ownership in their education. Students are allowed to creatively demonstrate their knowledge. Students are utilizing technology as a tool responsibly.

Outcome

To develop Students into informed and involved citizens; men and women of strong character; possess 21st Century Skills; and be college and/or career ready.

Positions Involved

Superintendent	Principal	Assistant Principal
Curriculum Coordinator	Tech Coordinator/Director	Teacher Development Network

Goal: Develop and maintain meaningful and enforceable policies

Goal Description

Develop means to monitor and enforce policies currently in place. The district must stay current with federal and state policy guidelines and develop and or modify policies as necessary. The district must also continue to educate our staff and students on active policies.

Supporting Strategy

The school district's policy development to enhance educational technology use is managed by the administration and technology committee. Recommended changes to policy are based on stakeholder survey results, and are then reviewed by district legal consultants and given to the administration and Board of Education for approval. The technology committee and district administration then distribute the information to teaching staff and students. If necessary meetings are held with teachers and students to educate them on the policies and to discuss implementation.

Needs Assessment

The district has the following Technology Policies currently in place: (7540 - Computer Technology and Networks) (7540.01- Technology Privacy) (7540.02 - District Web Page) (7540.03 - Student Network and Internet Acceptable Use and Safety) (7540.04 - Staff Network and Internet Acceptable Use and Safety) (5136 - Cellular Telephone and Electronic Communication Devices) (7530.01 - Staff use of Cellular Telephones) (8310 - Public Records). The district must be continue to be active in seeking out new information that pertains to policy and to re-evaluate current policies to determine if they are still relevant and effective.

Positions Involved

Superintendent	Principal	Assistant Principal
Curriculum Coordinator	Tech Coordinator/Director	Technology Committee

Evaluation

Reports pertaining to the implementation of policy and best practices are shared during administrative and technology committee meetings.

Description

The technology committee and administration will review stakeholder survey results annually and make recommendations to the Board of Education regarding policies. Administration will stay current on federal and state recommended policies for educational technology and develop or modify policies as necessary.

Outcome

The district and building administrators enforce and monitor the policies of the district and their daily implementation. The district technology staff also enforce policy.

Positions Involved

Superintendent
Curriculum Coordinator

Principal
Tech Coordinator/Director

Assistant Principal
Technology Committee

Goal: District Technology Leadership

Goal Description

Provide administrative facilitation of technology integration in the classroom and for each administrator to model effective uses of technology.

Supporting Strategy

The district will continue to train administrators on the use of technology and inform them on emerging technologies so that they can be effective leaders and facilitators of current and innovative educational technologies.

Needs Assessment

It is important that the district administrators continue to promote, advocate and utilize technology.

Professional Development

Method and Format

Administrators will continue to participate in workshops and conferences which emphasize the use of technology integration. The district will continue to strive to improve administrator's knowledge base of educational technology through workshops, seminars, presentations, speakers and conferences along with personalized learning sessions.

How to Measure

The effectiveness of the professional development will be measured by attendance, participation, facilitation, and the integration of technology into their daily administrative practices.

Support Goal

The primary goal is to provide administrators with exposure and training on current and emerging classroom technology and their effective use. The secondary goal is to provide the knowledge to administrators so that they can comfortably and effectively facilitate and integrate technology into their daily administrative practices.

Positions Involved

Superintendent
Curriculum Coordinator

Principal
Tech Coordinator/Director

Assistant Principal
All Administrators

Evaluation

Administrator-run technology breakout sessions during District Wide PD Days. Peer technology training. Develop a centralized resource to provide sharing and posting of videos and instructions developed by administrators.

Description

This process will allow administrators to be trained by peers in a user friendly environment in a manner that ensures mastery.

Outcome

Administrator-run PD opportunities that focus on specific tasks. Administrators and or participants will be able to implement and use ideas upon leaving.

Positions Involved

Superintendent
Curriculum Coordinator

Principal
Tech Coordinator/Director

Assistant Principal
All Administrators

Goal: Build a high capacity, reliable, and secure infrastructure

Goal Description

Build a reliable infrastructure utilizing the full potential of the infrastructure wiring. Create a high capacity, reliable and secure wireless network using a hosted solution and build a common telecommunication system for all buildings including the admin center using a hosted solution.

Supporting Strategy

In order to reach our infrastructure's maximum potential the district will need to replace all LAN 10/100 switches with switches that can utilize the 1 GB transmission rates our Cat 6 wiring can accommodate. All future equipment purchases will be required to function at the 1 GB transmission rate. This will be phased in as existing switches need to be replaced. Upon the completion of the new Elementary building project the district will consolidate our two wireless solutions to a hosted wireless solution for all buildings. The district will also move toward a hosted VoIP solution for all buildings creating a common communication system. The district will investigate the potential of off campus wireless solutions to provide CIPA compliant Internet access to students 24/7. Test will be performed annually on our Internet capacity and usage monitored monthly to determine if additional bandwidth is needed.

Needs Assessment

West Muskingum's network infrastructure consists of a 200MB Internet connection for the High School, Middle School and Falls Elementary (Campus) while Hopewell Elementary has a 20MB Internet connection. The Admin Center has a 10MB connection to the Internet. Each building on Campus is connected back to the High School using 1 GB fiber. All buildings are equipped with 10/100 LAN switches to facilitate internal connections. The District has deployed two wireless solutions. The first is a hosted solution providing wireless access for the High School and the second wireless network provide wireless access to the remaining academic buildings. The Middle School and High School utilize a VoIP Phone system. The remaining buildings use a stand alone phone system.

Positions Involved

Tech Coordinator/Director Technology Assistant

Evaluation

West Muskingum will monitor the Internet usage on a monthly basis to determine if an increase in bandwidth is needed for the upcoming school year. The district will also perform an annual stress test (Crash Day) to determine the network's capacity in a worst case environment. Both the single wireless hosted solution and telecommunication hosted solution will be implemented when all academic buildings are located on campus. West Muskingum will monitor the usage and security of the wireless solutions to maintain capacity and integrity.

Description

In order to determine if West Muskingum is making progress a systematic monitoring process will be implemented which will provide us guidance.

Outcome

The wireless solution and telecommunication solution is expected to be completed by the end of the first school year all academic buildings are on campus. The upgrade from 10/100 to 1GB wired network functionality will be ongoing as the district replaces wired network equipment. The Internet capacity goal will be ongoing as the district re-evaluates our needs on a yearly basis.

Positions Involved

Tech Coordinator/Director Technology Assistant

Goal: Access to 21st Century Technology

Goal Description

Provide teachers and students with the necessary technology to foster the mastery of 21st century skills in a personalized learning environment. West Muskingum is also moving toward a 1:1 environment. The computer devices will vary depending on age of the student, the work the student is required to produce and the requirements of various testing platforms. Teacher devices will be compatible with classroom instructional technology and will provide the means to perform all classroom management and instructional tasks. Classroom 21st instructional technology will be equitable across classrooms based on age and or grade level, content area, and student needs.

Supporting Strategy

To support the access to 21st Century technology the district will continue to encourage the student BYOD initiative. The district will also increase the access to technology in the Middle School and High School for personalized learning with the purchase of Chromebooks through the OAC Straight A Grant. The district will continue to purchase Chromebooks for classroom tech labs and testing labs for grades 3-12. In grades K-2 the district will purchase touch sensitive devices such as the iPad to accommodate our early learners. PC and MAC computers will be purchased for project based and production labs as the labs require higher processing power. PC Computers will continue to be purchased for teacher classrooms to accommodate the classroom instructional technology and provide teachers with resources for classroom instruction and management. Classroom 21st Century instructional technologies such as interactive whiteboards, projectors ,document cameras, etc. will be made equitable across classrooms based on age and or grade level, content area, and student needs. If funding becomes available the district will purchase devices for K-12 to reach a goal of 1:1. The district must also develop a system to evaluate new emerging technology and the impact on education.

Needs Assessment

West Muskingum utilizes a large number of computers that are outdated and difficult to maintain. Many computers have been configured to run as thin clients reducing the functionality of the computer but allows for them to perform basic internet searches and word processing tasks. A high percentage of the existing computers are desktop computers which are hardwired to the network and limits mobility and flexibility. Based on student population and online testing technical specifications the district will fall short on devices for students taking online assessments. Classroom instructional technology is showing its age. Several projectors installed during the High School and Middle School building projects are needing replaced. Not all classrooms are equitably equipped with ceiling mounted projectors, document cameras and whiteboards. Students need access to devices allowing them to express their creative side rather than being a consumer of technology.

Positions Involved

Tech Coordinator/Director Technology Assistant

Evaluation

Inventory reports and student population. Online testing platform requirements. Classroom instructional technology requirements. Knowledge of how learning spaces are being used. Annual classroom technology assessments.

Description

To monitor our progress of reaching this goal the district will look at our inventory reports along with student numbers. This will guide us as to where 21st Technology needs to be purchased. Monitoring the testing platform requirements and classroom instructional technology requirements will guide us in what specifications the 21st Century technology needs to meet or exceed. Another guiding factor of what 21st Century technology is required is knowing how that learning space is being used.

Outcome

The evaluation process will provide us with real data that will need monitored on a yearly basis to maintain equitable access to 21st Century Technology. It is understood that this goal comes with a cost and will need to be gradually and systematically implemented.

Positions Involved

Tech Coordinator/Director Technology Assistant

Goal: Support and Management

Goal Description

Provide a high level of support and proactive management.

Supporting Strategy

Continue to use the helpdesk system as it is working well. Standardize technologies such as a certain projector or printer models for classrooms. When standardizing technology look for technologies that allow for remote management and reporting. When purchasing new technologies, purchase an adequate warranty support plan no less than 3 years if possible. Start evaluating remote desktop support solutions as the district moves to a multi-platform environment. Evaluate current network monitoring software to determine if it is meeting our expectations and seek out replacement if it is not. Create a yearly maintenance plan for all technologies including classroom instructional technologies in an attempt to be proactive and reduce downtime.

Needs Assessment

West Muskingum employs two full-time staff to support and manage the growing number of technologies. To provide end user support the district utilizes a web-based helpdesk system. The same system also provides our Asset and Purchase Order Management. To facilitate end user support the district uses a remote desktop solution. For management the district uses several systems such as PRTG to report SNMP information along with other protocols. The district contracts out our copier and printer support. The district is responsible for several different technologies of different makes and models which makes support and management more difficult.

Professional Development

Method and Format

Participating on webinars, attending conferences, technology listserv and social networking, trade magazines, online professional development, workshops and reference books.

How to Measure

Learning about new tools and techniques to support and manage district technology.

Support Goal

The goal is to identify efficient methods for providing support and management and implementing those solutions.

Positions Involved

Tech Coordinator/Director Technology Assistant

Evaluation

Helpdesk surveys and reports, network monitoring reports, device reports, other reports that are found to be beneficial.

Description

To determine if the district is meeting the expectations of our end users the district will conduct annual surveys to identify our strengths and where the district needs to improve. To determine our efficiency the district will evaluate our helpdesk, network and device reports and other reports available.

Outcome

The outcome is to provide a highly available network with at least 99% uptime. IT Ticket resolutions within 3 days. Maintain two full-time people in the technology department.

Positions Involved

Tech Coordinator/Director Technology Assistant

Goal: Access to Resources and Applications

Goal Description

Provide 24/7 access to applications and resources that are platform independent.

Supporting Strategy

In order to provide 24/7 access to resources and application the district will begin migrating to more Internet based services that are device independent. Many of our personalized learning programs are Internet based. The district will research web-based Learning Management Systems to facilitate a personalized learning environment. The district is implementing Google Apps for Education and looking at our current software titles to determine if they too can be transferred to a cloud based environment. The district is migrating to a new web hosting provider that provides a responsive solution for our website. The district will continue to provide stakeholder communication through social media, email blasts, website postings and telephone calling system.

Needs Assessment

West Muskingum uses internet based programs on a daily basis for personalized learning and instruction. The district is in the process of migrating to Google Apps for Education and in the early stages of migrating our current website to a responsive website solution. The district is making strides in being cloud based and 24/7 accessible but the district still has a few software titles that need an alternative Internet based solution. The district will continue to use the Student Information System and online grade book software provided to us by LACA. The district will also continue to use the Food Services online system, Transfinder for Transportation Services, and PublicWorks for our safety and facilities management . The district is currently partners with the Muskingum County Public Library and benefit from the access to both their automated online library system and LACA's online library system.

Positions Involved

Superintendent
Curriculum Coordinator

Principal
Tech Coordinator/Director

Assistant Principal

Evaluation

Create an application inventory to identify all software either owned or subscribed to by the District including age/grade level in which it is being used and the application/content area it is being used in. Provide information used in selecting the application. Create an evaluation rubric to assist in the selection of new applications. Develop a tool to measure the impact of the selected application to determine if it is performing up to expectations. Create a systems map to identify all the systems being used in the district and their function. Create survey to determine if stakeholder communication is effective.

Description

A systematic process needs to be developed to determine if the applications and or systems being evaluated meet the needs of how they were intended to be used. The District must also identify if similar applications and or systems are currently being used and if the application being evaluated will create an overlapping of services and determine if that is desirable. Lastly the district must determine if the application and or system is producing the expected results. To maximize our stakeholder communication the district needs to learn what the recommended methods to communicate are.

Outcome

The desired outcome is to provide 24/7 access to platform independent applications. The applications and systems will have gone through a thorough evaluation and determined to provide the desired services and outcomes and will continue to be monitored on a yearly basis. The district will be effective in our communication practices to our stakeholders.

Positions Involved

Superintendent
Curriculum Coordinator

Principal
Tech Coordinator/Director

Assistant Principal

Goal: Provide a safe and secure network and building environment

Goal Description

Ensure all end users of the school networks and district owned devices that their information is safe and secure as well as provide annual training pertaining to internet safety and digital literacy. The district will also maintain our student safety and building security with IP based camera systems and utilize wireless phones for immediate response.

Supporting Strategy

The district will continue to use the Internet CIPA filtering, enterprise antivirus, email archiving and off-site backup solutions provided by our current vendor. The district will begin investigating solutions for cloud-based data backups and email archiving as the district moves toward a cloud-based environment. The district will monitor our wired and wireless network integrity and make modifications as needed. The district will continue to provide age appropriate digital safety education to our students annually and provide staff with information and resources for digital safety best practices. Perform semi- annually crash tests to ensure both data retrieval and preventative measures are functioning properly. The district consolidates the IP based security camera systems in all buildings to a single solution allowing remote view in the event of a situation. The district will also work with local law enforcement providing them with the necessary access to the IP based camera systems. The district will maintain our wireless telephone service accounts or verify key staff have a personal active wireless account suitable for their job responsibilities. The district will continue to provide annual internet safety and digital literacy training for students.

Needs Assessment

The district continues to use the Internet CIPA filtering, enterprise antivirus, email archiving and off-site backup solutions provided by our current vendor. The district will begin investigating solutions for cloud-based data backups and email archiving as the district moves toward a cloud-based environment. The district needs to develop monitoring practices to maintain our wired and wireless network's integrity and make modifications as needed. The district will also need to develop a better system to provide and document age appropriate Internet safety and digital literacy training to our students annually and provide staff with information and resources for digital safety best practices. All key staff have either a district supplied or personal wireless telephone suitable for their job responsibilities.

Positions Involved

Tech Coordinator/Director Technology Assistant

Evaluation

Review of filtering, backup and antivirus reports. Review of training documentation. Review of crash test results. Review wireless phone access for key staff.

Description

To ensure our networks and devices are safe and secure the district will rely on periodic reports and publish those reports on the technology website. To ensure our students receive annually digital safety and digital literacy training the district will rely on our annual training documentation. To ensure our data is secure the district will perform semi-annual data crash tests and retrieval.

Outcome

To ensure the district is safe and secure the district must show evidence that they are providing a safe and secure network and educating our students how to be responsible digital end users. The district must also show they are prepared in the event of a network and or data crash occurs.

Positions Involved

Tech Coordinator/Director Technology Assistant

Goal: Predict Total Cost of Ownership

Goal Description

Identify the Total Cost of Ownership of proposed equipment and service purchases and determine the budget required to operate throughout the life of that piece of equipment or service. Develop a refresh cycle that maximizes usage and minimizes cost.

Supporting Strategy

Develop a data gathering tool to assist in the collection of cost associated with either technology equipment or services, training, maintenance, repair, setup, and support to determine the total cost of ownership. Based on budget forecasts determine if the purchase of technology or services is sustainable. Determine refresh cycles of equipment that aligns to when it starts requiring more repairs. To ensure every technology dollar is spent in accordance with the technology plan a coding system will be developed linking each technology purchase to a Technology Plan Goal.

Needs Assessment

The district is very conscience of how it spends its budget and the total cost of ownership of equipment and services. The district has utilized donated technology which has increased our devices per student ratio but has resulted in many repairs to keep them operational. Additional funding will be required for technology as the district moves into a new elementary building and to support the technology cycles for both students and staff and as the district moves to a 1:1 environment a larger number of devices will be part of the refresh cycle . As the district moves toward a more cloud-based environment the district can expect reduced equipment cost and see an increase in service cost.

Positions Involved

Superintendent

Tech Coordinator/Director

Treasurer

Evaluation

The total cost of ownership will be monitored by reviewing the data gathering forms annually which were created prior to the purchase and evaluating the actual and projected costs. The refresh cycle will be monitored by the help desk system and reviewing the tickets submitted for technology repairs to determine if the district is retiring equipment before significant support costs are incurred.

Description

The district can determine if the Total Cost of Ownership and refresh cycle schedule is realistic if the budget supports it and if the district is cycling the equipment out prior to expensive maintenance cost being incurred. By moving to a hosted service model it will allow us to grow without concern about equipment maintenance and repair cost.

Outcome

All technology costs are accounted for and technology is being used effectively regularly and is being cycled out according to the developed refresh cycle scheduled.

Positions Involved

Superintendent

Tech Coordinator/Director

Treasurer