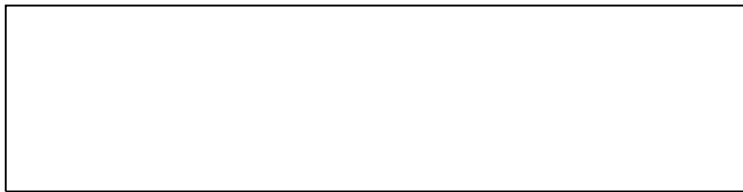

Pennsylvania Department of Education



Commonwealth of Pennsylvania
Department of Education
333 Market Street
Harrisburg, PA 17126-0333

Educational Technology Report

Thursday, September 08, 2011
(Last Approved: Tuesday, January 06, 2009)

Entity: Owen J Roberts SD
Address: 901 Ridge Rd
Pottstown, PA 19465-8402

Mission

The mission of the Owen J Roberts School District is:

Owen J. Roberts School District Community

Inspiring Each Student For Success Today And Greatness Tomorrow

Vision

The Owen J. Roberts School District has a vision of moving from "Good to Great". Our focus is to "Do the right thing at the right time for the right reason."

Below is a graphic representation of the vision of moving from Good to Great at Owen J. Roberts:

Owen J. Roberts School District

901 Ridge Road, Pottstown, PA 19465

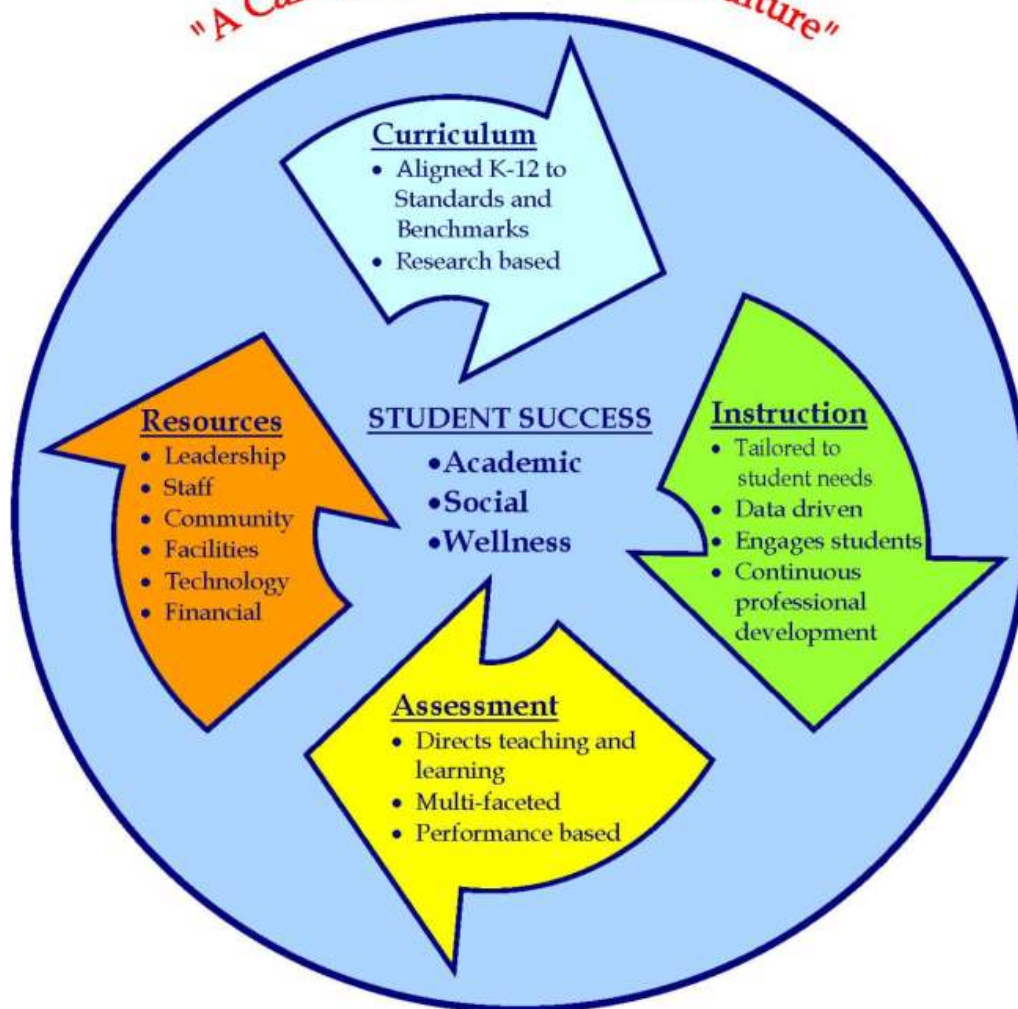
www.ojrsd.com

GOOD TO GREAT

Do the right thing at the right time for the right reason.

Always put students first!

"A Caring and Collaborative Culture"



Mission

The Owen J. Roberts School Community
Inspiring each student for success today and greatness tomorrow.

Shared Values

Together with parents, families and community, the Owen J. Roberts School District commits to provide opportunities for students to obtain the following academic values to acquire necessary knowledge and skills to be successful:

- Reading, writing, speaking and listening
- Mathematics
- Science and technology
- Environment and ecology
- Social studies (civics, government, geography, economics, and history)
- Arts and humanities
- Career education and work
- Health, safety and physical education
- Family and consumer science
- World languages
- Process information
- Problem solve
- Work independently
- Collaborate with others
- Adapt to change

In addition, to achieve its purpose the district is committed to the following:

- Local assessment plan
- Improvement of student achievement
- Provision of additional instructional opportunities for students
- Professional development plan

Needs Assessment

Reflections

There are currently no reflections selected for this section.

Current Technology Overview

The Technology Department at Owen J. Roberts School District began as subcontracted technology services and expanded to a technology staff of nine over the last ten years spanning expertise from Website and Network administration to Software and Hardware deployment and maintenance. The administration developed a vision of its information infrastructure that would enable both administrative and educational functions to achieve greater levels of productivity, creativity, availability, manageability, and security. Since then the Owen J. Roberts School Board has adopted numerous policies that have embraced this vision.

School Board Policy 815C overviews the structure of the OJR information network. Six fundamental design goals; Centralized Management, Low Total Cost of Ownership, High System Availability, High Scalability, High Security, and High Resource Availability, provide the necessary resources and connectivity to afford the staff and students of OJR with the greatest possible technological advantages without sacrificing availability, security and fiscal responsibility.

The Owen J. Roberts School District is technologically divided into two functional areas: Business and Academic. While each function has unique requirements for the delivery, accessibility and availability of information, they share several goals. These goals are:

Centralized Management

Low Total Cost of Ownership

High System Availability

High Scalability

High Security

High Resource Availability

These goals allow information systems to grow providing greater capabilities while controlling costs and ensuring appropriate usage and access to information.

Centralized Management

Centralized management allows the information systems team at Owen J. Roberts to maintain hardware and software without the need to visit each work area. The key components to implementing Centralized Management are:

Simple Network Management Protocol (SNMP) Enabled Devices

SNMP devices provide Information Systems personnel with the ability to monitor and configure hardware devices such as routers, switches, hubs and servers. As new devices are added to the Owen J. Roberts information network, the devices are or will be made SNMP enabled.

Desktop Management Interface (DMI) Enabled Workstations

As the number of workstations continue to expand at Owen J. Roberts, maintaining network system and workstation availability will become increasingly difficult without the ability of support personnel to upgrade and manage firmware and software remotely. The DMI standard defines methods for power cycling systems and upgrading BIOS firmware through network connections.

High Speed Wide Area Network (WAN) Connectivity

The implementation of a High Speed WAN Connection is essential to managing the elementary schools from any location within the District. The implementation of a connection that exceeds 500 KBPS is required in order to establish Remote Procedure Call (RPC) connection between servers. In addition, slower connections require significant wait times for screen and system database updates.

HP OpenView Management

HP OpenView is a pseudo-industry standard console for managing and monitoring SNMP enabled devices. (Other consoles and monitoring technologies are currently being

evaluated) It provides a graphical user interface, which highlights alarms and notifies device managers that problems exist. In addition, HP OpenView offers extensive monitoring and data collection for network traffic, power fluctuations, and resource usage. Because of HP OpenView's extensibility, device manufacturers offer management interfaces for their SNMP enabled devices that plug into HP OpenView. This ensures consistent management interfaces for all managed devices.

Total Cost of Ownership (TCO)

Total Cost of Ownership is a concept that pertains to the identification of all costs pertaining to network technology systems. This includes the direct cost of acquisition and installation, system support, user training, software upgrades, help desk support, and system upgrades. It also includes the indirect costs of technology ownership which includes but are not limited to salaries, physical plant modifications, furniture requirements, insurance, system downtime and other related costs that impact technology or are impacted by technology.

Under the Total Cost of Ownership concept, it is assumed that acquisition costs of systems represent a small percentage of the Total Cost. Owen J. Roberts has identified the following areas in which to balance the purchase price of systems with the Total Cost of Ownership.

System Reliability

Owen J. Roberts places great emphasis on the premise that engineered systems provide greater reliability than assembled systems. Often second and third tier manufacturers purchase components based on pricing and do not perform acceptance testing or even clearly define interface specifications. As a result, compatibility with other hardware and/or software becomes a hit-or-miss exercise. First tier manufacturers are most often engineered: components are supplied with the manufacturer's name and are tested for compliance with detailed specification. While this does not ensure compatibility, it usually means that compatibility is model dependent not unit dependent.

Support Reliability

The ability to obtain system support in a timely fashion prevents lengthy downtimes and user dissatisfaction. Evaluating the reliability or availability of a manufacturer's support mechanisms is difficult and time consuming. However, historical experiences, industry evaluations, and colleague feedback can provide vital information about product reliability.

System Consistency

Consistent system interfaces is greatest means of reducing system support, user training and help desk support. When BIOS screens are consistent among systems, Information Systems personnel gain a greater sense of familiarity and confidence with configuring systems. This reduces configuration errors and support frustration. Consistent end user interfaces allow users to share information between them. It eases training by requiring less one-on-one tutoring and allows help desk support personnel to "walk" users through many problems without requiring on-site visits.

Remotely Supportable Systems

Remotely supportable systems allow Information Systems and Help Desk personnel to upgrade firmware, monitor hardware failures and remotely monitor user interfaces. This reduces travel and on-site time, user dissatisfaction and increases the availability of Help Desk and Information Systems personnel.

System Policies and Profiles

System Policies and Profiles allow Information System managers to set system and software configuration settings on a global as well as controlled basis. Policies force systems to comply with specific settings that are considered essential to maintaining system operation.

TCO Supported Operating Systems

Implementing systems that support system policies, logon scripts, user profiles, and remote connectivity is required to controlling the Total Cost of Ownership. The use of browser based software and thin clients also become economical system additions assuming careful consideration of their potential role in the systems.

System Availability

Features that increase system availability should be included in any primary connect point or server on the information network. Any system that is accessed by a large number of users or is mission critical should have as few single failure points as possible. Information systems managers must recognize that no hardware platform is free from potential system failures, however, critical systems must be made redundant or offer fail-over where possible to reduce user down time.

Fault Tolerant Servers

Fault tolerant servers recognize that hardware failure will occur. By controlling single failures with backup systems, redundant components or correctable failures systems, availability is greatly improved. Mission critical servers within the Owen J. Roberts systems utilize RAID (Redundant Array of Inexpensive Disks) level 5 or higher to ensure data availability. In addition to RAID 5 disk configurations, all servers perform nightly full tape backups. Backup systems comply with approved procedures for tape rotation and off-site storage.

Fail-over/Clustered Systems

As newer clustering technologies become available, OJR implements fail-over and full clustered systems on mission critical servers for both business and educational functions. Fail-over clustered systems allow two identical systems to balance user load during normal operations, but provides mechanisms for one system to take complete control of both data structures and system processing in the event of a system failure. Full clustered systems allow multiple systems (greater than two) to provide the same load balancing and fail-over capabilities.

Structured Cabling Systems

Structured cabling systems ensure that the Owen J. Roberts School District takes advantage of high bandwidth applications as they become available without a significant reinvestment in the cabling plant.

Remote Monitoring

Remote monitoring such as done by SNMP devices allows information managers to identify resource bottlenecks, resource usage and system failures. In addition, consideration must be given to failure predicting devices on mission critical systems.

Scalability

OJR is dedicated to acquiring systems that are scale able to meet future growth and processing demands. Scalability of both hardware and software components is necessary to achieve systems that can expand to meet the rapidly increasing needs of the user community.

System Clusters

Clustered systems allow additional servers to be added to the network without reconfiguring the user database yet providing load balancing between the connected systems. As user demands on the main systems continue to escalate, systems can be added to eliminate resource and processor bottlenecks.

SMP Supported Systems

Only servers capable of expanding to multiple processors are considered for application servers within the Owen J. Roberts School District. The ability to add a second, third or fourth processor to help balance processing with the server is highly desirable to preventing processing bottlenecks.

Client/Server Applications

Client/Server applications provide the ability to reduce network bandwidth by eliminating the need to send all information to a client system for processing. Servers in the Client/Server system process database queries for the client and return only the desired information, reducing network traffic and bottlenecks.

Security

LAN Segmentation Between Academic and Business Functions

Creating separate LAN segments for the Academic and Business functions provide the ability to filter packets and prevent student access to business function through the OSI Network Layer.

Firewall/Proxy Server

A Firewall/Proxy Server is designed to prevent outside intruders from accessing the OJR systems as well as prevent unauthorized access to undesirable sites in the public network (Internet). A firewall/proxy server is in place to secure and implementing a district Intranet.

Encrypted User Authentication

The use of clear text password transmission is not allowed on any of the Owen J. Roberts School District network systems. The use of only encrypted user passwords ensures that

simple monitoring of the network from a workstation on the backbone will not provide hackers with the ability to gain access to restricted areas.

Single Login

The use of a single login simplifies access to the network and decreases the possibility that other users can decode other passwords by monitoring keystrokes at the workstation.

Accessibility

Resource Accessibility by User and/or Group

The ability to assign individual resources by user or by user group allows system managers to better utilize roaming profiles for users that log on to multiple workstations.

Authorized Access to any Resource

Network resources such as printers, fax servers, e-mail, etc. are key components to increasing the productivity and ingenuity of end users. However, allowing free access to all resources may encourage inappropriate use and waste. To prevent this, systems have the ability to assign authorized access to individual resources.

Intranet/Internet/Extranet Access

The Owen J. Roberts School District fully embraces the implementation of an Intranet with access to the Internet and access by support vendors through an Extranet.

Remote Access

For network support and non-Intranet access, limited access will be available through systems referred to as Remote Access Servers. These servers provide authenticated node access through dial-up lines. Remote access is granted to only a few individuals.

UPDATE: Remote access is granted to all district employees and selected support vendors for maintenance of critical systems. The district utilizes Cisco's secure, state of the art VPN client connecting to a Cisco ASA5520 VPN server.

Network/Telecommunications Overview

The Owen J. Roberts School District utilizes Microsoft networking and workstation components to deliver connected resources to their user community. To maintain security and compatibility, the Owen J. Roberts School District requires that all software and systems that integrate into the District's network operations maintain compatibility with Microsoft Windows operating systems (both desktop and server) that are no more than 1 revision older than the currently released version. Systems that operate at or below the transport OSI layer, must use TCP/IP or UDP/IP and must be compatible with CISCO networking components. Systems that utilize multicasting features of IP must operate utilizing CGMP or IGMP protocols. In addition, systems must peacefully coexist with tradition multicasting programs such as Video over IP.

Currently, the Owen J. Roberts School District is connected utilizing core CISCO Catalyst 2900 and 3500 series switches between each building and the core of the Ethernet Star

Network at the Administration building where a Catalyst 4000 joins all network segments. A Catalyst 4000 is also in place to connect to the Server Farm in our second administration building, Warwick, for access to such services as file storage, applications and our local intranet. Elementary buildings are connected to the main core via single-mode fiber optic cable utilizing Gigabit Ethernet standards and private 10.x.x.x network addressing. Secondary schools are connected to the core via private multi-mode fiber optic cable operating at Gigabit Ethernet. Beyond each core switch are no more than 3 levels of CISCO Catalyst 2900 and 3500 series switches connected via CAT 5e and fiber optic cable utilizing 100BaseT/100BaseFX/1000BaseFX protocols. All switches are trunked and configured for multicasting. The District utilizes VLANs to segregate building resources for security and performance purposes. The District utilizes a Cisco PIX 515-E, soon to be an ASA5520, for network security on the internet. The District heavily relies on Microsoft Active Directory for security and policy enforcement. All computer systems within the District are configured with Microsoft Windows XP.

The network infrastructure also contains many Wireless Network Adapters to allow laptop computers to connect to the network without Ethernet cable.

UPDATES to Network infrastructure include:

1. We now use a Catalyst 6500 series joins all network segments
2. PIX 515E is decommissioned and we've configured and maintain the ASA5520 firewall
3. The Wireless Network on Main Campus has been rewired to connect 250 Cisco Access Points (high speed N technology) managed by 4 Cisco wireless management controllers. In addition to adding capacity and features to our wireless network the wireless access is more secure, faster and reliable.
4. A new Avaya's Modular Messaging voicemail system has been integrated into the network supporting our VOIP technology including enhanced features.
5. Utilizing server virtualizing technologies for over 26 servers currently resulting in saving electrical and cooling costs.

Hardware Overview

To achieve the greatest effectiveness and availability of systems, the school district has standardized on quality hardware provided by Tier 1 vendors. The Owen J. Roberts School District strongly believes that systems must be fully supported by the hardware manufacturer, operating system vendor and all application vendors. The Owen J. Roberts Technology Team manages and maintains over 2,200 networked workstations throughout the District. All systems are less than 5 years old, have high-speed access to the Internet and District Intranets. All systems used in educational settings have multimedia capabilities.

The student population has grown to approximately 4,790, representing a nearly 18% growth rate since 2004. When compared to the number of instructional systems directly impacting student learning, a student/computer ratio averages 41% between Elementary and Secondary schools. This remains constant since 2004. Projectors and interactive white boards are two examples of the most prevalent technology available for classroom instruction. Currently on average, 44% of classrooms have access to projectors. Interactive whiteboards are accessible to 18% of classrooms on average with percentages as high as 32% in our Elementary centers. Accessibility to projectors and interactive white boards is expected to grow utilizing more cost effective, close-proximity projectors which combine the interactive whiteboard software with all the benefits of a projector.

UPDATE: OJRSD is now just over 5,000 students and have increased available systems and laptops to students and our computer/student ratio is well over 50%. Additionally, we've considerably increased the number of interactive white boards in classrooms.

Software Overview

In addition to hardware, OJR has standardized on a single system operating system and productivity software suite to minimize staff and student training and maximize effectiveness. Using a single system throughout the District and at all grade levels allows network users and support staff to focus on solving challenges rather than worrying about syntax or mechanics. Other software for remediation and differentiated learning has been incorporated into the software standard installation, also known as images, for use in the classroom. Images allow us to reset and clean systems efficiently.

UPDATE: The district is monitoring and accessing the latest trends in user hardware and software. The advanced movement to more mobile devices requires we test other devices and operating systems to support enhanced learning. We're accessing and finding classroom integration tools in the MAC environment as well other open source solutions.

Building on current technology, the Owen J. Roberts School District plans to enhance several key areas which are detailed below and based upon Strategic Planning groups and ongoing administrative leadership discussions.

Staff Development

The District must provide the time and materials necessary to maintain the technology skills for Educators, Administrators and Support Staff through many levels of staff development programs. In addition to traditional classroom training, staff development must also be provided in the form of on-line classroom materials, computer based training (CBT), technical periodicals, workshops, eBooks, and peer mentoring. Staff Development programs should also include discussions on future technologies, user groups, and on-line discussion groups. Extending state university graduate and undergraduate courses to "virtual" campuses through distance learning systems will provide opportunities for both Act 48 approved staff development as well as to advanced student learning.

Access to Information

Access to information is critical to achieving academic goals. Internally, educators and administrators must have access to individual student performance and aptitude information with the ability to infinitely re-organize the information in order to determine the best learning style and program for each student. Developing large data warehouses of student performance and aptitude information as well as the tools and skill to analyze the information are key components in using technology to "take learning to the learner."

Content

The ability to provide many different media formats in a natural and seamless manner is essential to assisting educators and learners with the transfer and development of knowledge. To support the delivery of multimedia information packets, the District must provide the infrastructure, delivery mechanisms, and catalogs to on-line information libraries. With the infrastructure currently in place to fully support multimedia delivery, the Owen J. Roberts School District is able to begin building, expand, and maintain catalogs to on-line libraries and internal digital libraries.

Communications

The District must continually provide parent and community access to information in such a way that confidential information cannot be breached, but can be access by authenticated community and family members. Providing secure portals that can allow families to access information regarding their student's life and learning progress is key to involving parents in a learner's development process. Extending online activities, such as meal prepayments using the Web, provide more contemporary and reliable methods for parents to accomplish simple, using technologies which have become standard. The taxpayers of the District also benefit from secure access to information. The status of tax bills and payments as well as assessment values and District financial information can greatly assist taxpayers with making informed decisions and provides convenient methods for payments.

The District must extend its resources to the community by offering connected centers where parents and community members can access information by developing partnerships with libraries, colleges and other institutions to provide every household with access to the public network. In addition, providing after hour access to District computer centers could allow all citizens of the District to become involved in the "connected world".

The District must provide rich, intuitive content on both Internet and Intranet portals. However, the District must understand that developing and maintaining content is an on going and time consuming effort. Content servers must be capable of expiring content and notifying authors of stale information. Content must provide meaningful information to the intended audience in an appropriate format for each user type. The Digital District's portal must deliver personalized content consistent with the age and function of the visitor. To become effective communication vehicle, the District's portal must ensure that community users regularly visit the site. Encouraging regular visitation requires the site to provide dynamic, real-time information from within the District as well as links to dynamic information on other sites.

Systemic Efficiencies and Information Security

Systemic efficiencies must be improved and regularly evaluated to manage costs and lower latency between events. Initiatives to improving the flow of information between administrative systems and reducing redundant data entry and entry errors will remain a priority. The District must develop a comprehensive drill-down financial and data structures that provide the essential information required by decision-makers, educators, community members and state officials to effectively manage and allocate District resources. This includes the development of building level purchasing and budget maintenance using appropriate authority and approval routing. Another important initiative is the creation of a single identifier for staff to be employee throughout all systems including payroll, human resources, student administration and intranet portals.

The District must provide secure access to information on both the internal and external portals. Using standards such as Public Key Infrastructure (PKI) to encrypt information and authentication parameters ensure that information is passed to and from the District's resources with the greatest possible confidentiality.

Assessment of Technology Needs

As technology becomes a more integral part of the learning experiences, the Owen J. Roberts School District must continually assess improvements and expansion of its

technology base in order to meet the needs of the educational program. Several areas become important as the dependency on technology increase in the classroom. They are:

- Reliability
- Security
- Staff Development
- Performance

Reliability is essential to successfully integrating technology into the learning program. As educators become more dependent on the availability of the technology in the district, they will also become insistent that the technology is available when they need it. If the technology is considered “unreliable”, it will not be used by classroom teachers and therefore will fail to have any impact on teaching and learning. To continue to build reliable systems, fault tolerant designs must be employed. Critical systems must be comprised of reliable hardware and fail-over or clustered systems to reduce downtime. Failure prone components such as power supplies must be redundant, and all critical or shared systems must be protected from power failures. Owen J. Roberts School District will continue to assess critical systems and upgrade these systems as required to clustered and/or fail-over configurations.

Security requirements in the classroom have several attributes depending on age group and system familiarity. To create a more consistent security interface, the Owen J. Roberts School District plans to implement biometric and smart-card network interfaces. These interfaces will be extended to library and cafeteria experiences as well as classroom and computer resource center systems. Through the use of biometrics, the OJR network can be made more secure while allowing younger aged and special needs children to access network resources without having to remember complex passwords or logins.

Staff Development has always been a key component to the Owen J. Roberts technology plan, however as we continue to integrate technology into the learning process, our educators must become adept at using the technology as well as provide guidance to our learning community with using the appropriate technology for a given task. Through partnerships with Universitys and a technology integration focus, OJR offer opportunities and develop technology based course work that focus on successful teaching concepts used in a technology rich environment.

Performance, as with reliability and security, continues to become essential in a technology-enriched classroom. Educators must accomplish a large number of tasks each day, and cannot be forced to “wait” for the technology to keep up. OJR continues to refresh older technology to ensure that all of our educators have the opportunities to utilize information in a multi-media rich environment. Maintaining network performance and system performance to deliver real-time, high quality video, audio and data is key to moving OJR to “the next level”. OJR will continue to upgrade its network backbone, provide video delivery systems over the network and upgrade classroom components to support requested medias of the future.

Goals and Strategies

Goal: Increase Communication

Description: Expand and enhance a diverse, media-rich communication system to reach all district constituents.

Strategy: Public Relations Management

Description: Develop a public relations mission to create a consistent and thematic brand for strategic marketing.

Activity: Establish a public relations position

Description: Create a job description for and hire a public relations coordinator whose responsibility will be to coordinate public communications involving television, radio and print media.

Person Responsible Timeline for Implementation Resources

Richard Galley	Start: 1/1/2009 Finish: Ongoing	\$388,700.00
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Status: Complete

Date Comment

9/7/2011	Not only is there a job description but the position is filled and funded by both grant and district funds.
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9/8/2011	The district currently has a Manager of School and Community Engagement which is partially funded by grants.
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Strategy: Television Station

Description: Broadcast student and school television productions to community through Comcast Cable.

Activity: Utilize OJR TV station

Description: Utilize OJR TV Station: Enhance the high school's television studio and programming for the Public Cable Network supporting student production curriculum, broadcasting student activities and successes and promoting OJRSD community events.

Person Responsible Timeline for Implementation Resources

Richard Galley	Start: 1/1/2009 Finish: Ongoing	\$109,000.00
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Status: In Progress — Upcoming

Date Comment

9/8/2011	The district maintains Television Studio equipment and facility at the High School to support increasing numbers of student enrolled in the Television Production courses.
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The studio broadcasts to Comcast Cable who streams the content to the local Public Education Governmental channel. Student productions are also streamed live and recorded to the district website.

Strategy: Website Portal

Description: Create an improved dynamic website.

Activity: Continued training, maintenance, and content management.

Description: All staff will engage in professional development activities designed to facilitate their utilization and content management of the district web site.

Person Responsible Timeline for Implementation Resources

Richard Galley	Start: 1/1/2009	\$65,000.00
	Finish: Ongoing	

Status: In Progress — Upcoming

Date Comment

9/8/2011	A newly designed website was released in December 2010. Extensive training for building and administrative staff has occurred. We are utilizing advanced 21st century tools for communication and learning and are continuing to provide support and training to content manage the district website. Teachers are expanding the classroom with increasing online content as well.
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Activity: Website Development

Description: Redesign website targeting to segments of the OJR Community including Students, Parents, Nonpublic School Families, and other Families, Business / Commerce, Higher Education, and OJR staff.

Person Responsible Timeline for Implementation Resources

Richard Galley	Start: 1/1/2009	\$117,000.00
	Finish: Ongoing	

Status: Complete

Date Comment

9/8/2011	The site was completely redone in second half of 2010 and continues to expand our communications capabilities and community outreach.
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Goal: Raising the bar with Technology

Description: Establish curricular/grade level expectations (requirements) for the use of technology as a seamless tool for teaching and learning.

Strategy: Technology Access and Availability

Description: To properly maintain and replace equipment and software supporting the academic needs of students and provide increase levels of technology to support the growing demand of technology integration.

Activity: Add new equipment to accomodate technology integration demands

Description: Identify curriculum requiring technology and as needed add additional equipment within the standards, guidelines and budget established by the district

Person Responsible Timeline for Implementation Resources

Richard Galley	Start: 1/1/2009	\$230,000.00
	Finish: Ongoing	

Status: In Progress — Upcoming

Date Comment

9/8/2011	AS faculty and students are increasingly dependent on technology to support learning, teaching and learning changes to integrate technology into curriculum.
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Activity: Replace current equipment within established life cycles

Description: Utilize Capital Reserve budget to replace and maintain current levels of equipment leveraging increasing computer capabilities at lower costs at or below budget.

Person Responsible Timeline for Implementation Resources

Richard Galley	Start: 1/1/2009	\$6,683,446.00
	Finish: Ongoing	

Status: In Progress — Upcoming

Date Comment

9/8/2011	This is an ongoing practice with an emphasis today on smaller mobile devices to support education and administration.
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Strategy: Technology in the Classroom

Description: Ongoing review/revision of technology expectations in alignment with the curriculum review cycle

Activity: Establish Benchmarks

Description: Create OJR technology benchmarks for each course/grade level. Alignment of technology standards with each level.

Person Responsible Timeline for Implementation Resources

Richard Galley	Start: 1/1/2009	-
	Finish: Ongoing	

Status: In Progress — Upcoming

Date Comment

9/8/2011	The district has adopted the SAS model to establish standards aligned with curriculum.
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Strategy: Technology Integration

Description: Integrate technology expectations into supervision plans

Activity: Update supervision rubric

Description: Development of technology component of supervision rubric as part of OJRSD supervision plan

Person Responsible Timeline for Implementation Resources

Richard Galley	Start: 1/1/2009	-
	Finish: Ongoing	

Status: Complete

Strategy: Technology Skill Assessment

Description: Assess skills in technology for implementation and use in teaching and learning for students, teachers, and administrators

Activity: Identify required skills by building

Description: Develop strategies for implementation of technology resources and professional development based on needs

Person Responsible Timeline for Implementation Resources

Richard Galley	Start: 1/1/2009	-
	Finish: Ongoing	

Status: In Progress — Upcoming

Date Comment

9/8/2011 Needs assessment is ongoing with our focus on learning communities in the next year.

Strategy: Technology Standards

Description: Increase student/faculty awareness and understanding of Pennsylvania Technology Standards

Activity: Interpreting the Standards

Description: Develop consumer-friendly (readable and understandable) versions of current PA Technology Standards utilizing Whole-Faculty Study Groups, faculty meetings, department meetings, and videoconferencing between buildings to communicate standards

Person Responsible Timeline for Implementation Resources

Richard Galley	Start: 1/1/2009	-
	Finish: Ongoing	

Status: In Progress — Upcoming

Date Comment

9/8/2011 These activities are standard practice and will be continued in the development of vertical teams also focusing on common core and keystone preparation.

Budget

Potential Budget for a NEW plan report that will span 7/1/2012 to 6/30/2015

Funding Source	2012-2013	2013-2014	2014-2015	Total
010 - ADMINISTRATIVE BUDGET	\$1,326,300.00	\$1,336,300.00	\$1,346,300.00	\$4,008,900.00
Other	\$30,000.00	\$30,000.00	\$30,000.00	\$90,000.00
Grand Total	\$1,356,300.00	\$1,366,300.00	\$1,376,300.00	\$4,098,900.00

Goal: Increase Communication

Expand and enhance a diverse, media-rich communication system to reach all district constituents.

Public Relations Management	2012-2013	2013-2014	2014-2015	Total	Funding Source
Establish a public relations position	\$48,300.00	\$48,300.00	\$48,300.00	\$144,900.00	010 - ADMINISTRATIVE BUDGET
Establish a public relations position	\$30,000.00	\$30,000.00	\$30,000.00	\$90,000.00	Other
Television Station	2012-2013	2013-2014	2014-2015	Total	Funding Source
Utilize OJR TV station	\$18,000.00	\$18,000.00	\$18,000.00	\$54,000.00	010 - ADMINISTRATIVE BUDGET
Website Portal	2012-2013	2013-2014	2014-2015	Total	Funding Source
Continued training, maintenance, and content management.	\$10,000.00	\$10,000.00	\$10,000.00	\$30,000.00	010 - ADMINISTRATIVE BUDGET
Website Development	\$10,000.00	\$10,000.00	\$10,000.00	\$30,000.00	010 - ADMINISTRATIVE BUDGET
Subtotal	\$116,300.00	\$116,300.00	\$116,300.00	\$348,900.00	

Goal: Raising the bar with Technology

Establish curricular/grade level expectations (requirements) for the use of technology as a seamless tool for teaching and learning.

Technology Access and Availability	2012-2013	2013-2014	2014-2015	Total	Funding Source
Add new equipment to accomodate technology integration demands	\$30,000.00	\$30,000.00	\$30,000.00	\$90,000.00	010 - ADMINISTRATIVE BUDGET
Replace current equipment within established life cycles	\$1,210,000.00	\$1,220,000.00	\$1,230,000.00	\$3,660,000.00	010 - ADMINISTRATIVE BUDGET
Subtotal	\$1,240,000.00	\$1,250,000.00	\$1,260,000.00	\$3,750,000.00	
Grand Total	\$1,356,300.00	\$1,366,300.00	\$1,376,300.00	\$4,098,900.00	

Potential Budget for an AMENDMENT to the currently approved plan report that spans 7/1/2009 to 6/30/2012.

Funding Source	2009-2010	2010-2011	2011-2012	Total
010 - ADMINISTRATIVE BUDGET	\$777,920.00	\$1,285,526.00	\$1,325,300.00	\$3,388,746.00
Other	\$50,000.00	\$25,500.00	\$30,000.00	\$105,500.00
Grand Total	\$827,920.00	\$1,311,026.00	\$1,355,300.00	\$3,494,246.00

Goal: Increase Communication

Expand and enhance a diverse, media-rich communication system to reach all district constituents.

Public Relations Management	2009-2010	2010-2011	2011-2012	Total	Funding Source
Establish a public relations position	\$5,000.00	\$20,000.00	\$48,300.00	\$73,300.00	010 - ADMINISTRATIVE BUDGET
Establish a public relations position	\$25,000.00	\$25,500.00	\$30,000.00	\$80,500.00	Other
Television Station	2009-2010	2010-2011	2011-2012	Total	Funding Source
Utilize OJR TV station	\$10,000.00	\$5,000.00	\$15,000.00	\$30,000.00	010 - ADMINISTRATIVE BUDGET
Utilize OJR TV station	\$25,000.00	\$0.00	\$0.00	\$25,000.00	Other
Website Portal	2009-2010	2010-2011	2011-2012	Total	Funding Source
Continued training, maintenance, and content management.	\$15,000.00	\$10,000.00	\$10,000.00	\$35,000.00	010 - ADMINISTRATIVE BUDGET
Website Development	\$50,000.00	\$15,000.00	\$22,000.00	\$87,000.00	010 - ADMINISTRATIVE BUDGET
Subtotal	\$130,000.00	\$75,500.00	\$125,300.00	\$330,800.00	

Goal: Raising the bar with Technology

Establish curricular/grade level expectations (requirements) for the use of technology as a seamless tool for teaching and learning.

Technology Access and Availability	2009-2010	2010-2011	2011-2012	Total	Funding Source
Add new equipment to	\$45,000.00	\$65,000.00	\$30,000.00	\$140,000.00	010 - ADMINISTRATIVE

accommodate
technology
integration
demands

BUDGET

Replace current
equipment within
established life
cycles

\$652,920.00 \$1,170,526.00 \$1,200,000.00 \$3,023,446.00 010 -

ADMINISTRATIVE
BUDGET

Subtotal **\$697,920.00 \$1,235,526.00 \$1,230,000.00 \$3,163,446.00**

Grand Total **\$827,920.00 \$1,311,026.00 \$1,355,300.00 \$3,494,246.00**

Staff Development

Professional Development

To establish the benchmarks for each course grade level in conjunction with the strategy to review and revise technology expectations as part of our curriculum review cycle, we will complete the following tasks as part of our plan for professional development:

1. Survey of current usage/Collection of current practices
2. Effectively communicate to all teachers of current practices
3. Compare to PA technology standards
4. Identify gaps between current and PA technology standards

To integrate technology standards in conjunction with the strategy to create student and faculty awareness of Pennsylvania Technology standards, we will complete the following tasks to plan for professional development:

1. Collecting resources of all kinds specific to technology such as professional development vignettes
2. Archival of resources
3. Identify types and uses of media
4. Model and use electronic course management to create a library of technology integration practices, standards, etc.

The professional development plan will include update to the supervision rubric, the basis for teacher evaluation, to ensure technology integration using the following tasks:

1. Survey of frequency of technology use by teachers and students quarterly
2. Based on the survey of technology uses, create suggested implementations of technology integration by subject area or grade level in the supervision rubric
3. Effectively communicate technology integration expectations of faculty

Technology skill assessment will be completed at each building to identify gaps in technology skills in the completion of these tasks:

1. Create user groups by building.
2. Identify expectations regarding use of technology applications (ex. Plato, Compass Learning, etc.)

3. Strive for and encourage the use of electronic media to reduce the use and dependence on paper.
4. Form a partnership of community consisting of both external and internal technology leaders to understand the application and implication of educational technology on the student's educational program and consult on the needed technological skills necessary in the real-world application of technology.

The technology team includes an educational technology integration focused position. One of the primary goals of the technology integration position on the technology staff is to create a partnership between our K-12 Supervisor of Instruction, K-12 Math Coordinator, K-12 Science & Technology Coordinator and the Director of Technology, Education Technology Coordinator and the Assistant Superintendent. The charter of the group is to assess use and needs, develop professional development programs and continually monitor and assist with technology integration leveraging the current technology and justification for the addition of equipment to meet the growing demand for technology in the classroom.

Technology-related professional development is part of in-service programs throughout the year annually and is required. Other informal training and workshop programs are planned and available for small groups and included in faculty meetings. Opportunities will be given in conjunction with lunch periods and planning periods. Additionally, before and after school programs are under consideration. A progression of courses is being developed and when completed will carry with it an Owen J. Roberts Technology Certificate. The purpose is both for education and the use of technology in the classroom creating a dynamic and interactive learning environment. Another outcome would be the development of power users to model technology best practices and work with teams of teacher working to standardize curriculum, etc. Less formal methods of training such as a train-trainer model have been successfully applied in past professional development initiatives.

The Chester County Intermediate Unit, for which Owen J. Roberts is a member, has many technology tools and training opportunities. We've worked with the IU to coordinate offerings for our teachers and have provided substitutes to as part of our train-the-trainer model and team teacher coordination. We've partner with several vendors to work with software implementation and training. Microsoft has an extensive educational program targeting to schools using on-line web-based training modules to accommodate small windows of time for self-guided training using repetition and accommodations for varied skill levels. Pennsylvania has an Educational Technology Conference and Expo with a proven track record and exposure to hardware, software and educational opportunities held each year. The availability of archival using tools like Elluminate® offer flexibility for access to professional development programs 24/7 when teacher or staff schedules are in conflict. Pa. Training and Technical Assistance Network also have many training opportunities targeted to technology and specialty areas both online and off site.

Improved library services have been introduced using Destiny's WebPath and Z-Source resources to educational and research based tools for teachers and students. This resource has been underutilized and will be promoted in this coming year by the Technology Integration Team.

Owen J Roberts School District has adopted a Course Management System platform named Moodle. This platform has been used by Chester County IU to model training for staff and teachers and has provided training to the Technology Integration team on its tools to manage a classroom. This tool additionally is currently available for teachers to augment their classroom environment with online resources and self-generated multimedia and teaching files. The goal is to encourage the use of Moodle to extend the classroom beyond the school day and allow student interaction in discussions and submitting work on-line for collaboration and sharing. As part of the Classrooms for the Future initiative, Moodle has been used to integrate English and Social Studies for a ninth grade class of standard level students identified who would best be suited for alternate learning modalities. The development of this curriculum to use Moodle and

with a Laptop cart is to continue and is targeted for future classes and will serve as a model to other teachers considering an alternative.

Communicate the importance of having a unified message from the school district in the successful creation of a marketing brand to be used in all our media including newsletter, website and television. Integrate into everyone's job responsibility the practice of sharing the successes and activities of the district in and outside of the classroom to be distributed using our forms of media. Instill the importance of managing website content as the responsibility of everyone directly or through building representatives. Develop easier and more user-friendly systems to update and enter information onto the website by encouraging feedback for managing and posting content. This can be accomplished at building level staff meetings and one-on-one support in using a content management system.

Monitoring

The technology integration team will be made up of at least the following key positions: K-12 Supervisor of Instruction, K-12 Math Coordinator, K-12 Science & Technology Coordinator, Director of Technology, Education Technology Coordinator and the Assistant Superintendent. The team will continually monitor activities using the following opportunities on a regular basis:

- Technical support requests
- Weekly Technology staff meetings
- Monthly Technology Integration meetings either on-site or online using collaboration tools
- Network monitoring and maintenance tools for usage and access data
- Quarterly surveys of both staff and students using either formal or informal methods

Additionally, teacher's use and integration of technology into curriculum will be monitored as part of the annual evaluation plan as stated in our Action Plan. The Professional Development plan includes a sequence of tasks to be completed to ensure technology integration is successfully completed and includes assessment, expectations, standards, and implementation.

Utilize a community group representing administrators, teachers, staff, students, the school board, parents, and community business and education leaders to respond to how the OJRSD portal can provide services and information in their daily lives. Invite these representatives to provide ideas and their expertise to create a bridge between the school district technology and the outside world practical application of technology. The role of this group, as a Technology Advisory Council, will be to access how technology based services and information should be distributed and available to the community at large.

Evaluation

Owen J. Roberts will annually evaluate the progress of the technology plan with a focus on student's quality of education. The reports and data collected through monitoring should be used as feedback to measure the success of technology integration. Documentation should be accumulated starting with teacher evaluations to support how curriculum has changed to include the use of technology. The absence of technology equipment to meet curricular goals should be documented as well to justify the addition or redistribution of equipment to meet needs.

Regular meetings of the Technology Advisory Council should be used to determine the needs of the community. And subsequently both virtual and on-site meetings can assist in assessing how the services and information from all media are providing value to our target audiences.

The evaluation of all professional development sessions should be used as a tool to move forward. Surveys should provide information and when summarized allow the district to adjust goals or strategies appropriately.

When goals or strategies are not accomplished, the district should consider other resources both financial (if that is the blockade) and people to provide renewed energy and ideas.

Utilize tools inherent in website technology to monitor website visits, service utilization and feedback. As the Public Television Station is developed, viewership can be documented both formally and informally. Additional township agreements (currently we have two of seven townships on board) with Comcast to carry the TV station will be vital feedback to the demand for the programming to be provided by OJRSD.