

St. Margaret's Episcopal School
Educational Technology Plan
2009 – 2012

Supporting Curriculum, Instruction, Professional Development, and Administration

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Overview

Our students live in a diverse, globally connected, digital society that will require its leaders to use technology to produce, create and imagine solutions to problems as part of their daily lives. At St. Margaret's we are preparing the leaders of tomorrow by using research-based best practices to cultivate imagination and challenge thinking.

The purpose of our technology program is to support classroom environments that use technological resources to promote cognitive development through inquiry, real and relevant problem solving, collaborative endeavors, and differentiated instruction. Through the use of constructivist teaching practices, the St. Margaret's faculty will facilitate and guide student learning by teaching students to process information, create and make meaning of complex concepts, and develop effective and productive habits of mind.

Over the next three years we will continue to establish and refine our educational environment to support 21st century curriculum and instruction with resources and instructional strategies that enable our students to learn content and skills needed to be successful leaders of the 21st century. In addition, we will implement and maintain technology systems and the necessary infrastructure to support the school's overall mission and interaction within the larger community.

The world of the future – with its ubiquitous search engines, robots, and other computational devices – will demand the capacities that until now have been mere options. To meet this new world on its own terms, we should begin to cultivate these capacities now.

- Howard Gardner

Vision

THROUGH THE FOCUSED USE OF TECHNOLOGY RESOURCES, STUDENTS WILL BE 21ST CENTURY LEADERS WHO ARE INDEPENDENT THINKERS, SKILLED COMMUNICATORS, CREATIVE PRODUCERS, EFFECTIVE RESEARCHERS, COLLABORATIVE WORKERS, ETHICAL LEADERS, AND LIFELONG LEARNERS.

The primary focus of our plan is to support the curriculum, instruction, and assessment of information and technology literacy within all classrooms. In today's world, information and technology are inseparable and ubiquitous. It is through technology that we easily access vast amounts of information, utilize powerful tools to process information, and apply multiple platforms to disseminate information.

This unification has irrevocably changed the nature and necessities of education. While always important, it is now imperative for all students to acquire well-honed skills in critical and creative thinking, communication, collaboration, and resourcefulness. With the increase of global interactions, they must also develop an understanding and comfort with multiple perspectives, context, empathy, and ambiguity. These multi-faceted skills require students imbued with the qualities of an independent, life-long learner with the ability to flexibly adapt to an ever-changing assortment of technological tools.

The only constant for our children moving forward is that of change. As such, we will instill in our students the skills and understandings that will allow them to recognize potential problems and opportunities and generate effective plans for action, using a wide array of technology resources to effectively and ethically accomplish their goals.

We have organized our strategies into five primary focus areas:

- Learning,
- Teaching,
- Assessment,
- Systems Infrastructure, and
- Resources and Communication.

Each area is interrelated and while each is important individually, no single focus area has the transformative effect alone as when combined with the others.

Our students live in a digital world, and our schools must adapt instruction accordingly. We have the opportunity and the responsibility to use research-based, technology-enabled practices to thrill, inspire, and capture the imaginations of our students. [We] hope to create environments for deeper cognitive development through inquiry, real and relevant project based learning, and differentiated instruction. The program turns teachers into facilitators, guides, and co-investigators; students become producers, apprentices, and co-explorers. Our plan establishes 21st century instructional settings using 21st century techniques to enable 21st century children to succeed.

- Michael Golden

Focus Areas

Learning

Collaborative, communicative, inquiry based, differentiated, students are active contributors

All learners will be able to identify and use appropriate strategies and technology resources to effectively access and use essential information to accomplish their goals creatively, safely, and ethically. Learning experiences will provide opportunities for collaboration and the development of self-directed learning skills that promote life-long learning as a global citizen supported by ubiquitous access to digital tools.

Teaching

Collaborative, differentiated, relevant professional development, digital resources support instruction

All educators will be able to identify, select, and implement appropriate technology resources and strategies that effectively support instructional objectives within a 21st century learning context that meet the individual and diverse needs of all students. They participate in appropriate professional development opportunities to ensure their own development and learning.

Assessment

Meaningful, collects historical data, analysis and reporting, supports instructional decisions

Students, educators, administrators, and parents should have access to the kinds of data which provides a continuous process of evaluation and accountability for the use of educational technology as a learning and measurement tool.

Infrastructure

Ubiquitous, reliable, secure, robust, supports digital access to content 24/7

Maintain an industry-standard infrastructure system which supports all students, faculty, and administrative staff by enabling high quality access to learning, communications, and management systems anytime and anywhere.

Resources and Communications

Environmentally responsible, anywhere/anytime access

Students, staff, administrators, employees, parents, and expanded community will be able to safely interact with digital information on demand, communicate virtually as appropriate, and function efficiently and effectively in a digitally reliant community.

Background

In 2006 as we embarked on our 21st century learning plan, our vision was to integrate technology to enhance and facilitate student learning, instructional practice, communication, and information management. This Technology Plan is being created to support the overall curriculum and instruction goals established in our 2008 strategic plan. Our plan for the next three years includes:

- Recognizing the groundwork and achievements we have set in motion over the last few years,
- Outlining core beliefs essential to successful deployment of technology into teaching, learning, and assessment,
- set clear, attainable, measurable goals, and
- identify the strategies and action steps necessary for success.

In the fall of 2008 a task force including faculty, students and parents attended work sessions and meetings to brainstorm ideas and discuss various components for inclusion in the plan. In the spring of 2009 we began to collect data from the broader community through the use of surveys and interviews. Faculty, staff, administrators, parents and students participated in the data collection process. The questions were designed to collect information about:

- how technology resources are currently used,
- technology needs related to specific roles or responsibility,
- effectiveness of the current infrastructure, and
- uses of technology in the future.

Some of the key findings from the survey and interview data included:

Students in grades 6 through 12 (516 respondents):

- 63% use the computer for school work 1 – 3 hours per day and 15% use it more than 3 hours
- 53% prefer taking courses that use a moderate level of technology and 28% prefer courses that use it extensively
- 85% describe themselves as using new technologies when made available
- 23% described their internet search and evaluation skills as intermediate and 72% indicated that they were advanced
- 66% like to learn through running internet searches
- 59% agree that using technology in their courses improves their learning
- 46% never use the library website
- At least 75% are using presentation software or spreadsheets in their courses
- Only 49% are able to obtain course materials through technology if they miss a class

Faculty (111 Respondents)

- 40% use the computer for work 1 – 3 hours per day and 50% use it more than 3 hours
- 56% prefer teaching courses that use a moderate level of technology and 23% prefer using it extensively
- 84% describe themselves as using new technologies when made available
- 33% described their internet search and evaluation skills as intermediate and 60% indicated that they were advanced

- 66% like to learn through running internet searches
- 68% agree that using technology in their courses improves student learning
- 75% identified a need for more professional development opportunities for using technology in the classroom and to support their own productivity
- 43% never use the library website
- 73% are using presentation software and 45% are using spreadsheets in their courses
- Only 43% provide course materials through technology to students if they miss a class
- 89% agree that technology services are available when needed

The individual comments centered around two primary themes:

1. Effective use of technology in the classroom requires significant amounts of time initially for planning and utilizing, and
2. Professional development and technical support is viewed as essential for success.

In addition to survey and interview data, a review of related literature and research was conducted. This review included prior technology plans and goals used at St. Margaret's, technology plans from other independent and public schools, technology standards and literature and research from organizations such as the Partnership for 21st Century Skills and the International Society for Technology in Education. Current trends in education, business, communication, and global politics were evaluated, as was a review of emerging technologies on the horizon likely to have a large impact on teaching or learning.

Another key element in this plan's development was the consideration of initiatives and projects already in process at St. Margaret's in which technology plays a pivotal role. Because of their importance, an update of these projects follows along with a description of some of the key technology resources supporting teaching and learning.

Overview of Current Initiatives and Projects

Teaching & Learning in the 21st Century

Our 21st Century learning initiative encourages and equips us to assess the evolving requirements for our student's future success, the emerging resources for instruction, and the new learning opportunities that are now possible. These efforts are vital to maintaining the school's commitment to prepare students who excel in the colleges, careers, and communities of their choice.

In recognition of changing needs and future challenges, the school continues to shift away from the accumulation of information towards the acquisition of key concepts and skills that are essential for success in the 21st century and the descriptions of the two assignments below are excellent examples of 21C learning in action.

"To put this assignment in perspective, when I was in 8th grade, I "had" to memorize every signer and where they were from. The purpose of this assignment was to create a more meaningful connection with one of the signers. The 8th graders know about the risks of voting yes for independence on July 2nd, 1776 and the risks involved with signing their names to the Declaration of Independence. They also know the significance of what this document represented for our nation based on events leading up to and following the Revolutionary War. The goal of this assignment was to have them create a video that demonstrated their respect for a particular signer. We all know about John Hancock, John Adams, and Thomas Jefferson. Our students were asked to choose a signer that is more obscure, research them, and then create a video that would make the signer proud. The "test" was in their being able to make a video where the signer, if he were to see it, would say, "Thanks, I appreciate that you have honored me in this way."

This kind of project wasn't available back in the day of when I was in 8th grade. But now, with what we have at our disposal, we can create these kinds of assignments for the students. After having the students do a quick self-analysis following the project, my sense is that they know more about what it means when they read in the Declaration of Independence that these men pledged their lives, their fortunes and their sacred honor. In May, when we visit the National Archives Building in Washington D.C., seeing the actual Declaration of Independence might have added value as a result. I'm confident that they can't list all 56 signers and where they came from...but neither can I." (Mike Allison, MS History teacher)

"Seventh grade English students participate in a unit centered around research and debate. Students must research both the pro and con sides of a controversial issue. Students use computers to access eleven sources while continually evaluating each source for credibility and reliability. Students learn to access sources via the web and via database subscriptions held by our St. Margaret's Library. Students use the online learning platform Angel to access course documents, access teacher lessons, review video of guest speaker visits, and participate in online discussions about the debate topic. Students complete formal outlines and formal research papers, utilizing Microsoft Word for outline formatting and word processing, and NoodleTools (an online citation tool) to create a works cited. Students use email as a team communication tool during preparation for formal debates. During the debates, students debate for a panel of judges. Judges are generally teachers, administrators, and qualified members of the St. Margaret's community, usually from the fields of law or journalism. This requires students to use technological resources, literacy skills, critical thinking skills, and collaborative learning skills – all pieces of a well-rounded 21C curriculum." (Jeni Johnson, MS English teacher)

Since students need tools that allow them to access, process, and use information in powerful ways, we've provided a class set of wireless laptops to every teacher in 5th, 6th, and 7th grades. Two classroom sets of wireless laptops per grade are available for sharing to teachers in 3rd and 4th grades, and three sets to 8th grade. In the Upper School, there are five classroom sets of wireless laptops that are shared by the English, History, and Foreign Language departments. The Science labs in for grades 8th through 12th, each have 10 laptops along with a classroom set of wireless laptops that is shared by between the two Biology labs. In addition, we've installed digital whiteboards and document/artifact cameras in many 3rd – 12th grade classrooms since active interaction with content is imperative for dynamic learning. Moreover, we've made online resources available including ANGEL, Web 2.0 sites, Everyday Math, Atomic Learning, and NoodleTools that support the development of important alternative instruction and assessment options in all grades.

As we begin the '09-'10 school year, each division is involved in some aspect of 21st century learning:

- **Preschool**

Technology is defined in "broader" terms to include not only computers, but light tables where students gather together to experiment with line, color and form, often in three dimensions which links with the 21st century goals of thinking creatively, synthesizing information and working collaboratively. It also includes tools such digital cameras and tape recorders, which are employed by the faculty to support our goal to '*make learning visible*' and to increase our documentation of children's work to:

- capture children's thinking process
("Children have better imaginations than they do memories")
- help parents understand that children learn through play
- help teachers be 'reflective practitioners' and **intentional** in their teaching.

- **Lower School**

The Lower School is expanding targeted instruction in information and technology literacy, increasing the use of specific technology tools, and further developing key assessments. In K-3 we are utilizing a reading assessment tool that uses Internet tablets to pinpoint student's learning of various reading skills and graphs their progress in mastering these important building blocks for future educational success. We are piloting a similar program in 1st grade for our math curriculum.

- **Middle School**

Teachers in grades 6-8 have developed a new context for teaching and learning where they're combining best practices with new expectations, techniques, and technologies. In addition, they've identified explicit learning skills for each subject area and focused life skills that are not only relevant beyond the classroom but also consistent between each grade and class.

- **Upper School**

Teachers continue to investigate and evaluate strategies and resources that best meet both the demands of the 21st century learner and the current collegiate requirements.

Curriculum Mapping

In 2007 we began using Performance Pathways Techpaths software to map our curriculum in grades K-12. The software was customized for faculty to use the Understanding By Design curriculum planning model to describe the units of instruction that make up each course. This model requires faculty to plan essential questions, content, skills and assessment for every curriculum unit that they teach.

Upon completion of the initial data entry of curriculum into Techpaths we began a curriculum review process to examine potential gaps or overlaps in our curriculum, to refine essential questions and enduring understandings for each unit, and to define the content and skills necessary for students to understand concepts.

In 2009 we began looking at the role of assessments in our curriculum and how new media and collaborative work including blogs, podcasts, and video are best evaluated.

Technology Concepts & Skill Proficiency Development

Students must have the necessary technological fluency to ensure that they will have the skills to:

- utilize a computer for the acquisition and creation of information,
- select the appropriate technology applications supporting spreadsheets, word processing, and multi-media including Web 2.0 sites, and
- understand the significance of technology in the modern world.

St. Margaret's Episcopal School adopted the National Education Technology Standards for students in 2001 as identified by ISTE (International Society for Technology in Education). These standards state that "*technology literate*" students should have regular opportunities to use technology to develop skills that encourage personal productivity, creativity, critical thinking and collaboration in the classroom and daily life. The American Library Association defines "*information literacy*" as the ability to recognize when information is needed and the ability to locate, evaluate, and effectively use the information. Information is multiplying at an alarming rate and our students must be equipped with the life-long skills to ethically, evaluate, process, present, and effectively use information. *Media Literacy* is the building of critical thinking skills that enable people to understand, question and produce various forms of media. Our students are surrounded 24/7 by a variety of media in all parts of their lives and it is imperative that they become active consumers of information by learning to identify, analyze, evaluate and even create their own messages in various media formats.

This combination of literacy skills drives our definition of a "technology literate student" and supports our overall instruction and identification of skills for each grade level to support this "technology literacy". The library plays a key role and supports the 21C initiative through a collaborative planning and teaching model that ensures students learn curriculum content as well as the 21c literacy skills of accessing, processing, and using of information.

Computer instruction in K – 2nd has an emphasis on technology skill development through the use of EasyTech, a web-delivered technology curriculum from Learning.com which is aligned with the ISTE standards. Skills are introduced and practiced individually, while whole group instruction reinforces these skills utilizing a curriculum based project. Keyboarding is an integral part of the technology curriculum. Not only does the student have the opportunity to learn appropriate fingering positioning

and body posture, but the vocabulary is consistent with age appropriate phonics and often reflects the wall words used by the core curriculum teacher in the classroom.

Grades 3 -5 begin digital media literacy while increasing the exposure to emerging technologies. Technology literacy continues with EasyTech from Learning.com, introducing new skills and information appropriate for these grades. As the students begin collaborative group work and exploring web 2.0 applications, media literacy and information literacy emerge. Keyboarding continues with sentence formulation and paragraphs using science and social studies based curriculum. Historical figures are often highlighted after a section of the keyboarding program is complete.

Everyday Math is supported in grades 1 – 5 through an online community of information and games. Each student has the opportunity to access this website at home and at school. The website offers reinforcement, remediation and advanced work at each grade level.

Grades 6 – 7 attend a quarter long technology class including topics on internet safety and copyright laws. Through cooperative learning projects, students are able to collect data, use online authoring tools, and publish an original piece of work to share with lower school students. In addition, 7th grade students are introduced to computer programming that allows exploration of problem solving techniques as well as forecasting outcomes.

8th grade students are offered electives in technology in programming, digital media and animation. The students are offered the opportunity to select and apply appropriate technology tools to collaboratively complete a project, which includes, but is not limited to, online communities.

In grades 9 – 12, students have the opportunity to take electives in computer programming and digital media as well as participate in Tartan Productions, a club which includes activities where students learn about media literacy based upon The Center for Media Literacy's *5 Key Questions* and *5 Core Concepts* and are learning to become members of a participatory culture in the 21st Century.

Mastery of technology, media and information literacy are supported through pre-assessment, tutorial, and post-assessment opportunities aligned to ISTE standards. These assessments are given in 5th and 8th grades utilizing tools from learning.com and atomiclearning.com. In grades 9 – 12, students are required to successfully complete the technology proficiency assessment or complete the quarter-long Computer Applications course to satisfy the necessary graduation requirement.

Technology Resources

- **Angel**

Presently we use Angel, a learning management system (LMS) which augments and extends the classroom experience by delivering course materials and providing the ability to build communities around classes. Whether a course syllabus, email, discussion, or more administrative tasks, the use of the LMS has been primarily focused on content presentation although it has a number of tools to support anytime learning and collaboration such as wikis and blogs. We have a solid foundation in place which will help us move forward to use technology to create learning environments that allow students to become actively engaged, independent, lifelong learners, and support knowledge creation, knowledge gathering, and knowledge sharing. Faculty involved in the 21C program have expanded their use of Angel to incorporate rubrics that provide objective results, design assessments that measure specific skills, and creating forums for composition and collaborating.
- **Atomic Learning**

Provides online training resources for technology proficiency, professional development, and technology integration projects
- **FAWEB**

Allows faculty to enter grades, attendance, final term grades with comments, view student record information, and produce reports on progress and missing assignments
- **Learning.com**

Provides web-delivered lessons for developing technology literacy skills for grades K-8 . Includes lessons and activities that teachers can incorporate into their curriculum
- **Naviance**

Provides the ability to manage all aspects of the college admissions process and analyze historical results
- **Netclassroom**

Provides students with the ability to view daily assignments, grades, and register for classes. Enables parents to check their child's grades, attendance, schedule, print report cards, view billing statements, and enroll students in after school clubs.
- **NoodleTools**

Noodletools is a web-based research tool that coaches students to cite sources appropriately and extract information ethically. Noodletools is a series of online templates and forms that provides prompts to develop good notetaking skills. Students compose e-notecards and then can maneuver their e-notes into their outlines or into piles as needed. Noodletools is the 21st century equivalent of old fashioned notecards - same smart thinking, just greener and more flexible.
- **Online Library Catalog**

The online library catalog, Destiny Quest, enables students to search for library resources and web resources via a single search method. This graphic search tool facilitates access to web resources that are preselected as grade level appropriate. Web 2.0 features allow students to publish their book reviews and create bibliographies.

- **Subscription Databases**
 Students have access to a variety of subscription databases which serve as a portal to a plethora of full-text magazine and journal articles, reference book articles, newswire and newspaper articles, maps, primary documents, videos and video clips, transcripts, pictures, archival documents, and up to the moment information. Subscription Databases include JSTOR, Proquest, Gale, SIRS, FactsOnFile, Discovery Streaming.
- **TechPaths**
 Provides the ability to document curriculum utilizing standards, identify assessments, and reporting capabilities to analyze the data to identify strengths and weaknesses.
- **Type To Learn 4**
 Provides web-delivered keyboarding lessons for grades K-6.
- **Video Conferencing**
 Students have access to experts and other learners from around the world via a Polycom videoconferencing system. This system enables multi-point conversations. Through videoconferences students have questioned authors, heard from experts in career fields, and watched an autopsy. Videoconferencing technology gives students access to a variety of viewpoints and experiences and provides opportunities to share their own insights with others.
- **21c Lab**
 Located in the Library, the 21c lab was designed to support and facilitate a variety of learning experiences. Wireless technology and the rolling lab furniture can be reconfigured to support individual work, group work, theatre seating, or large group meetings. The 21c lab houses videoconferencing equipment, an interactive whiteboard, a scanner, printers, a document camera, and digital television display.
- **Digital Media Studio**
 The Digital Media Studio provides a place for students to pursue the development and production of media projects in various media formats that include social networks, websites, podcasts (both audio and video), and videos that populate a student broadcast meant to inform and educate viewers in 10-15-30 second spots.

Systems Infrastructure

Our industry-standard infrastructure system supports our community of students, faculty, and administrators by providing high quality access to learning, communications, and management systems anytime/anywhere and provides effective just-in-time technical support for its users. It supplies easy access to tools that allow students and teachers to access online information and materials, work collaboratively, share resources, and expand learning beyond the traditional classroom. Teachers, parents, and administrators have immediate access to data and information essential to the success of students and the effective operation of the school.

SMES has made a consistent investment in our technology infrastructure, computer hardware and software, and resources over the years. Our stable infrastructure which supports 10 buildings over a wide-area network and more than 1000 computers, is sustained through regular maintenance, upgrades, and technical support which provides for the effective and efficient delivery of services. The technology department is staffed with individuals with the necessary technical and networking skills to ensure that networks, computers, software, and phone systems remain reliable, secure, flexible and available to meet the ever-changing needs of the school. As SMES continues to increase our dependency on the infrastructure for management of student information, curriculum, instructional resources, professional development, web services, and other administrative functions, it is critical that our long term plans allow for increased staffing to ensure that the current levels of reliability and rapid response to technical support needs are maintained. Capitalizing on efficiencies when possible and disaster recovery planning is also essential.

The SMES infrastructure is standardized using primarily Microsoft, Dell and Cisco technologies to utilize enterprise level strategies to maximize productivity and minimize total cost of ownership. SMES uses current generation, standardized hardware wherever possible to minimize support issues, and promote ease of use and familiarity as students and faculty move throughout the campus.

Network

The underlying network is a gigabit fiber backbone that uses Cisco Catalyst 2950 switches to uplink each building back to a Cisco 3750 switch in the distribution center. From the Distribution center internet access is provided using a Cisco Pix 515e firewall connected to a 10mb bonded T1 line from XO communication. The wireless infrastructure consists of 55 Cisco Access Points strategically placed and connected to the Cisco 2950 switches to best serve the schools computers. Wireless setup, firmware updates, and configuration changes are automated through the use of a Cisco 1030 WLSE.

Administration

Our software backbone uses Microsoft's Active Directory to provide user, computer, remote and wireless authentication through a single provider. Our implementation of Active Directory also allows system wide automation through group policy objects which includes: printer installation, client wireless settings, network connections, system updates, virus configuration, software installation, user folders and shares and system/user desktop configurations.

Data

For data services we use Windows SharePoint, Blackbaud Database software, Angel Learning framework and .Net web applications all using Microsoft SQL Server as the backend data store. SMES's email system serves approximately 1400 users through Microsoft Exchange on the server end and a combination of OWA and Microsoft Outlook as the clients.

Services

Software updates are all provided by Windows Update Services, Virus Protection for all servers and Workstations is provided by Microsoft Forefront Security, OS installation is all automated through Microsoft Windows Deployment Services, Wireless Security is done through Microsoft Internet Authentication Service, Remote Access is provided through Microsoft Routing and Remote Access in conjunction with AIS, Backups of server system state as well as enterprise and user data is provided by Microsoft Data Protection Management Server. SMES maintains wall-to-wall wifi services and supports WPA2 encryption. Personally owned devices are not supported on the network. The network is available for use 24/7.

Data Center

A climate conditioned network center with key-card access is maintained in the Gateway building. Uninterruptible, redundant power, and HVAC services is maintained. Backup procedures including daily incremental and weekly full backups are employed including off-site tape storage will secure data integrity.

Internet Filtering

SMES maintains an internet content filter that monitors and controls access to Internet resources on all wired and wifi devices and complies with the Children's Internet Protection Act (CIPA). A filtering device from 8e6 Technologies is used and is synchronized with the Active Directory accounts for faculty, students, and staff to determine the level of internet access. A committee meets periodically to evaluate system settings and strategies.

Computer Hardware

Desktop machines are Dell Optiplex series, equipped with 17" - 19" monitors to maximize productivity. These are used in the computer labs, library, and as dedicated presentation workstations in our auditoriums and conference areas.

Laptop hardware centers around the Dell Latitude line of notebooks and netbooks, and are used primarily by teaching faculty to facilitate a consistent workspace between school and home. They are also the basis for our 21c laptop cart program used wirelessly by students in the classroom. These are docking-station compatible for quick connect/disconnect to network, printers, and projectors in each room.

Apple hardware can be found in the Digital Media Lab, where the editing and production of SMES audio/video projects takes place.

Software

Our computers run the Microsoft Windows Vista operating system, and the standard image loaded onto every machine includes: MS Office 2007 and Internet Explorer, Adobe Photoshop CS3 and Acrobat Pro. Other software is loaded based on the needs and expected usage of the particular machine, cart, or lab.

Printers

SMES uses HP printers wherever possible, both inkjet and laser varieties. A typical setup would be small personal inkjets on the teacher desks, and larger laser machines in the common areas for high-volume printing both by faculty, and students using the laptop carts.

Projectors/Digital Whiteboards/Document Cameras

All classrooms and auditoriums on campus are fitted with digital LCD projectors from NEC and Dell. These are used for group learning and collaboration in the classroom, as well as assemblies and events in the meeting rooms and other large venues around campus.

In the classrooms the image is projected onto digital whiteboards which are interfaced with the instructors' machine to provide all the capabilities of a chalkboard/dry erase board, while simultaneously interacting with documents and web pages creating dynamic learning possibilities. Interwrite is the vendor used for grades 6-12 and Promethean in the lower grades.

We also use AverMedia document cameras in the classroom to display books, objects, and other non-digital items on the digital whiteboard to integrate them with the 21c classroom.

Replacement Cycle

Primarily 4 years on desktops and classroom notebooks. Primarily 3 years on notebooks used by faculty and staff. Lifecycle is extended when possible and depends on use, overhead, and budget considerations. Other infrastructure equipment such as servers and switches are replaced or repurposed on average 3-4 years.

Telecommunications

Our phone system is the Toshiba Strata CIX670 digital system that can handle over 670 ports/ phone extensions. It is meant for large businesses and can be linked to other phone systems if further expansion is required. Although it is a digital system it can handle analog ports/extensions as well.

Our voicemail system, Strategy ES Administration, is located on the digital phone system. Physically it is represented as a card on our phone systems main cabinet so it does not occupy space outside our phone system. Maintenance is facilitated through software. It has 200 hours of voice storage.

Our bell system is located on a computer as a software interface. It is primarily software based with little hardware other than the computer. The software, Toshiba Ultimate Communicator, uses our PA system to send out the bell tones.

Our PA system, the Valcom V2924a, is used to broadcast announcements and bell tones throughout the whole school. It uses low voltage speakers both inside and outside of the school.

Emergency Communications

Cellular phone service with radio broadcast frequency is provided to key administrators and operations staff. (Include a statement about the radios). SMES also uses AlertNow, a communication service, which provides us with the ability to notify parents via voice, email, and SMS messaging in the event of an emergency situation.

SMES Website

The smes.org website is built on a foundation of standards compliant html, CSS and aspx. It is currently hosted in-house on a server running Microsoft IIS v 6. The static portions of the site are maintained by hand using Coda (<http://www.panic.com/coda/>). All graphic elements are produced with a mix of Adobe Fireworks, Photoshop, Illustrator and Flash.

The non static elements (features / news and announcements) on the front of smes.org are generated by pulling rss feeds via java script from Tartan Today and the 30th Anniversary site. The content is managed by the communications office. The Calendar portion of the website is managed by the SchoolSuite platform provided by Silverpoint. The calendar content is managed by the division secretaries and a central calendar manager.

Athletics.smes.org/index.aspx, the SMES Athletics website, manages the schedules for all Middle and Upper School athletics. The site is an html/css shell built around the Microsoft Sharepoint technologies and Microsoft IIS v 7 which allows for coaches and athletic administrators to manage schedules, scores, news and other team information.

Tartan Today, College Counseling Blog, Tartan Express and the Pre School Blog are all running on an externally hosted server running Wordpress MU (Wordpress Multi User <http://mu.wordpress.org/>). Wordpress MU allows for multiple blogs and Wordpress sites to be administered via a central admin point.

Administrative Systems

SMES utilizes an integrated suite of products from Blackbaud Systems to support our administrative functions. These include:

- Education Edge supports Admissions, Family and Student Information, and Registrar functions such as course scheduling, report cards, etc.
- Financial Edge and Student Billing supports Accounting functions
- Raisers Edge supports the Advancement office functions
- Faculty Access for the Web (FAWEB) which allows teachers to manage their gradebooks, enter attendance, record comments, and view student record information
- Netclassroom, which allows students to view their grades, and parents to view report cards and billing statements via the web
- School Store Manager which is used by the bookstore to manage purchases and interfaces with student billing
- Netcommunity which is used to for a variety of web related services tied to our databases, such as emails to our community, surveys, directories, and updating family profile information.

In addition to the Blackbaud systems, we utilize the following products and services:

- Performance Now for employee performance evaluations
- ADP for payroll processing
- Hot Lunch Ordering, a custom system developed in-house
- Transcript system, a custom system developed many years ago to provide colleges with a student transcript. (We are migrating away from this system to utilize Blackbaud.)

Integrated Database

Upon acceptance to St. Margaret's, an applicant is enrolled and the family information becomes active in the primary all school database. In order to communicate effectively with our parent body, St. Margaret's is committed to maintaining an accurate database. Our primary all school database is continually being updated as we learn about information changes. Parents have two options for updating family information: (1) Accessing their family profile on-line and using their assigned user ID and password or (2) Notifying the system's database administrator either by phone or e-mail. Parents will also be contacted when mail or e-mail is returned to St. Margaret's in order to verify information and ensure that our data is as accurate and up-to-date as possible. Once a change is made to a parent or student record, our integration process updates every 15 minutes and will be reflected in both the Financial Edge and Raisers Edge databases.

All continuing and new families are contacted annually via email and provided with an individual user ID and password is provided so parents can update and make necessary changes to their family profile. The on-line family profile area can be accessed and updated at anytime throughout the year.

Annually, graduating twelfth grade students are changed to Alumni status and non-returning students will be changed to withdrawn. Reports are provided to the Advancement Office regarding these changes in order to maintain constituent coding only used within their database. Before school begins in September the primary all school and Advancement Office databases are reviewed for accuracy.

SMES Help Management System

Support is currently handled through our custom SMES Help Management System software to assign, track, and categorize technical issues. The request is entered into an online form, and after the user answers some basic questions, the ticket is submitted and assigned to one of our Tech Department employees, based on their field of expertise. The designated employee and the end-user are then notified of a new task, and to whom it has been assigned. Status updates and issues are inputted to this system, and are distributed through email. When the task is complete, the tech closes it out in the system, and the user is notified. All tasks are kept in a database, for tracking type of problem, submitter, tech team performance, and resolutions.

Policies and Procedures

All Students, Faculty, and staff receive an acceptable use policy regarding the use of the SMES network. School and network administrators monitor the use of information technology resources to help ensure that uses are secure and in conformity with this policy. Administrators reserve the right to examine, use, and disclose any data found on the school's information networks in order to further the health, safety, discipline, or security of any student or other person, or to protect property. They may also use this information in disciplinary actions.

Each faculty/staff and student, grades 3-12 have a unique logon ID and password integrated with our Blackbaud system and a private data storage area on our network. Every employee and students 6-12 have an email address.

Operations and Support

The Director of Academic Technology is responsible for all administrative and academic areas of technology and manages a staff of eight people. The technical staff currently includes 5 1/2 people who operate and support the infrastructure. Each person has a primary job responsibility with some overlap into other areas. These include:

- Network Administrator
- Desktop Support
- Audio Visual, Phone System, Bells Support
- Website and Web related Support
- All School Database Registrar
- Blackbaud Administrative Systems Analyst Support (1/2)

In addition to these technical positions, there currently are 2 ½ people that support the academic functions which include technology course offerings, technology integration with curriculum, and digital media support.

The role of the Instructional Support Specialist is divided between 3 functions:

1. teaching technology courses primarily in the Middle School and managing and ensuring students meet required technology proficiencies
2. collaborating with Lower School faculty on technology integration projects in tandem with the technology skills students are learning
3. Providing a wide variety of technology user support that ranges from technology integration with curriculum, supporting our administrative staff on Office applications along with our Performance Evaluation system, and supporting applications in the Lower School such as Learning.com and Type To Learn 4.

The role of the Digital Lab Support Specialist is to:

1. Manage, supervise, and provide technical support to faculty, staff, and students that use the Upper School technology lab and the Digital Media lab**
2. Provide technical writing as required for policies and procedures
3. Support media production of campus activities, teach Newspaper and Tartan Production courses, and oversee the Tartan Productions club for the Upper School
4. Primary support for Breakthrough SJC

** There is a ½ time person that assists in supporting the Upper School technology lab

Key Objectives and Major Strategies

The following section identifies the overall vision, objectives, strategies, and goals for each of the five focus areas that have been identified:

- ❖ Learning
- ❖ Teaching
- ❖ Assessment
- ❖ Infrastructure
- ❖ Resources and Communication

A number of these strategies are already in process and the implementation of others will be accomplished through the specific goals that have been identified over the next three years of the plan.

Focus Area - Learning

All learners will be able to identify and use appropriate strategies and technology resources to effectively access and use essential information to accomplish their goals creatively, safely, and ethically. Learning experiences will provide opportunities for collaboration and the development of self-directed learning skills that promote life-long learning as a global citizen supported by ubiquitous access to digital tools.

Objectives

- Students utilize multiple digital tools to access, process, and use information for a variety of authentic purposes.
- Students use appropriate digital resources to effectively communicate and collaborate (including at a distance) to further personal learning and contribute to the learning of others.
- Students exhibit critical and creative thinking skills while utilizing technology resources to identify/solve opportunities and problems and make informed decisions.
- Students identify and understand human, cultural, and societal issues related to technology, and practice appropriately sensitive and ethical behavior employing safe strategies when operating within an online environment
- Students post content to real and virtual display spaces. Easy and instant access to media systems where they can view materials and share.
- Students utilize the new tools and techniques of the social web to advance their academic goals. Help students reflect on their use of technology to achieve this.
- Students work collaboratively in groups to accomplish goals with all members contributing

Strategies

- Students will master computer productivity tools, internet safety, online collaboration, relationship management systems – aligned with ISTE Nets 2.0 standards. Develop scope and sequence of skills by grade
- Utilize digital portfolios for students to measure progression
- Expand use of digital signage on campus for student messaging allowing student groups to create their own content including Public Service Announcements (PSA), advertise club meetings, happenings, etc.
- Increase and expand Digital Media literacy to expand opportunities for students to become producers of information
- Continue the implementation of the 21C plan to ultimately provide 1:1 access in grades 3-12
- Evaluate and expand the use of 21C strategies into the math curriculum
- Evaluate the introduction of computer science concepts in earlier grades to develop critical thinking skills and problem solving
- Increase the use of library digital resources
- Evaluate and implement the use of mobile devices, like iPad, and video devices, like Flip cameras, for specific projects and/or specific curriculum areas

Focus Area – Learning

Goals

2009-10

1. Identify key components of computer science to include in curriculum
2. Identify strategy for student digital portfolios

2010-11

1. Pilot key components of computer science in selected classes
2. Implement digital portfolios in 5th and 6th grades
3. Pilot Beebots in Kindergarten, a program using a little robot for teaching sequencing, problem solving, and estimation
4. Develop taskforce to create a strategy for increasing use of library resources
5. Evaluate the implementation of programs and activities that promote interactive, problem solving, academic challenges such as:
Destination Imagination www.idodi.org
6. Evaluate the expansion of courses promoting science, technology, engineering, and math (STEM) www.mn-stem.com

2011-12

1. Pilot the Mind Institute Math software in lower school to supplement our math curriculum to enhance mastery of math concepts and problem solving
2. Implement computer science components into all classes
3. Implement digital portfolios in 7th and 9th grades
4. Implement Beebots into other lower school classes
5. Implement strategy for increasing library resources into selected classes

Focus Area - Teaching

All educators will be able to identify, select, and implement appropriate technology resources and strategies that effectively support instructional objectives within a 21st century learning context that meet the individual and diverse needs of all students. They participate in appropriate professional development opportunities to ensure their own development and learning.

Objectives

- Educators design, develop, implement, and evaluate relevant and authentic learning experiences and assessments, incorporating contemporary technological resources to maximize the learning of essential concepts and skills.
- Educators understand local, global, and societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices.
- Educators effectively employ the use of technology resources that assist in the school's ongoing evaluation of curriculum and instruction.
- Educators utilize the new tools and techniques of the social web to advance their teaching goals.
- Educators participate in on-going professional development to ensure proficiency in using technology tools and implementing instructional strategies in a 21C environment.

Strategies

- To ensure the effective integration of technology to support productive systems for teaching and learning in a 21st century context, administrators will create and implement appropriate changes to teacher evaluations to meaningfully measure teacher progress and effectiveness.
 - Educators to meet NETS teacher standards. Provide learning opportunities to ensure faculty meet standards and SMES 21C instructional strategies
 - Develop an online course with content specific to SMES 21C strategies and NETS standards similar to www.21things4teachers.net/index.html
 - Identify teachers that have completed the 21C training and are teaching "21C transformed classrooms". Teachers accepting this designation will host peer teachers to observe their practices and participate in the development of other professional development activities.
- Develop and publish a Library-Technology-Classroom collaboration map developed which includes calendar of major literacy units K-12.
- Increase the use of video conferencing
- Evaluate the use of digital portfolios for faculty
- Expand professional development opportunities, topics, and formats – differentiating where possible - to promote best pedagogical practices to support teaching with technology.
 - Help teachers understand which technologies to use and when – model lessons – time to learn, practice, give constructive feedback
 - Expand the use of Professional Learning Communities to share best practices
 - Host webinars highlighting best practices & training for the use of Angel and other tools
 - Provide support in the integration of Web 2.0 tools to support the curriculum and for improving collaboration
 - Provide access to relevant, engaging and up-to-date digital resources
 - Allocate more time for staff development

- Establish a dedicated professional development center for engagement, learning, and teaching – provide resources and experience to support deeper learning and effective teaching
 - Develop a drop-in model of two-hour workshops to afford teachers opportunities to learn new skills. All models will be task oriented, emphasizing how to master information, communication, and creativity based on ISTE teacher standards using information technologies.
 - Create opportunities for webinars and other online resources
- Review curriculum maps in all K-12 subjects to identify 21C instruction strategies and technology resources
- Add additional person for professional development – technology instructional specialist
- Better utilization of online resources provided by publishers and integration into Angel learning management system

Focus Area – Teaching

Goals

2009-10

1. Conduct training for administrative team on NETS standards for administrators, teachers, and students
2. Develop strategy for creating an online course for faculty based on the NETS standards for teachers and the SMES 21C strategies
3. Expansion of Angel tools in teaching

2010-11

1. Add 3/5 technology instructional support person
2. Conduct training for faculty on NETS standards for students and teachers
3. Develop the content for the online course for faculty based on the NETS standards for teachers and SMES 21C instructional strategies
4. Evaluate how Angel could be utilized for content currently maintained in Techpaths
5. Evaluate the use of digital portfolios for teachers for professional development and evaluation
6. Identify and develop several 2-hour workshops for teachers that are offered quarterly – investigate the use of Webinars for these
7. Conduct technology sessions on a regular basis specifically addressing requests from faculty and providing a forum for teachers to share 21C classroom practices

2011-12

1. Require faculty to complete the online course based on the NETS standards for teachers and the 21C strategies
2. Implement the expectation of meeting the NETS teacher standards as part of the faculty evaluation process
3. Implement solution for combining content in Techpaths with Angel
4. Implement the use of digital portfolios for teachers

Focus Area - Assessment

Students, educators, administrators, and parents should have access to the kinds of data which provides a continuous process of evaluation and accountability for the use of educational technology as a learning and measurement tool.

Objectives

- Students demonstrate a sound understanding of basic technology concepts, systems, and operations.
- Educators demonstrate a sound understanding of technology concepts, systems, and operations that are representative of an innovative professional in a global and digital society.
- Administrators enhance their own professional practice and increase effectiveness and productivity through technology use
- Continue efforts to use Angel and other technology resources to assist teachers in creating and using formative, summative and common assessments to measure student progress
- Implement assessment and data driven decision making to inform instructional practice and differentiate instruction

Goals

- Identify and articulate measurable skills that are subject specific and relevant in a 21st century learning context which will be used in the development of assessments, design of instruction, and selection of appropriate content and resources. Using these skills within our curriculum maps will allow for data driven reporting and evaluation along with bringing vertical alignment to student learning.
 - Develop vertical learning skills for each subject
 - Expand the use of rubrics for assessing the skills vital to a 21st century learner providing students with a clear picture of what success looks like
 - Develop, design, and provide models of assessment tools for 21C skills
- Utilize proficiency assessment tool – learning.com (5th) and atomiclearning.com (8th)
- Follow the NETS standards for Teachers and Administrators. Evaluate teacher and administrator proficiency.
- Follow the NETS standards for students. Conduct pre and post assessments 5th grade using Learning.com and 8th grade using Atomic Learning.com
- Develop key assessments for placement in Digital Portfolios and demonstrating knowledge
- Develop better integration with book publisher products
- Implement a data management system to compile historical benchmark assessment data and provide reporting to administration to view trends, etc.
- Continue to refine the reporting of 21C skills - provide students and families with the ability to view report cards via the web – student progress, assignments, homework, etc.
- Develop, design, and provide models of assessment tools and professional development to improve classroom curriculum and instruction practices.
- Expand the content of the “learning walks” and observations to include data focused on 21C teaching to provide feedback on improving instruction
- Continue with UCI Research and evaluation of our 21C project. Review their recommendations and implement revised strategies as necessary.

Focus Area – Assessment

Goals

2009-10

1. Identify common assessment tool, standards based for reading & math in 4th & 5th grades
2. Purchase and implement Testwiz to utilize as data warehouse for ERB results
3. Identify the role of assessments in our curriculum and how new media and collaborative work including blogs, podcasts, and video are best evaluated

2010-11

1. Utilize Testwiz to analyze test data
2. Implement pilot for common assessment tool for reading & math in 4th & 5th
3. Refine the assessment and reporting of 21C skills
4. Migrate LS language arts assessments from paper/pencil to ANGEL, using appropriate categories and links to efficiently generate meaningful data.
5. Develop a strategy to share the results from the UCI 21C report with the community

2011-12

1. Implement common assessment tool for reading & math into all 4th & 5th grade classes
2. Investigate the use of alternative final assessments in the Upper School

Focus Area - Infrastructure

An industry-standard infrastructure system which supports all students, faculty, and administrative staff by enabling high quality access to learning, communications, and management systems anytime and anywhere.

Objectives

- Expand appropriate use of key technologies.
- Expand infrastructure and/or facilities to further the support of “just-in-time” technical assistance and anytime/anywhere access.
- Provide network and infrastructure that will support productivity and the efficient use of advanced information tools in the administration of school operations
- Provide technology infrastructure to deliver high quality voice, video, and data services to ensure effective use of technology resources
- Provide necessary technical support to ensure availability and reliability of technology resources
- Review and revise policies and procedures to ensure equitable access to all users

Strategies

- Complete implementation of the 21C initiative
- Provide access to digital packs for teachers which include video, still cameras & audio recording devices
- Expand storage for digital content and create private video area such as “ Tartan Tube
- Expand the Digital Lab & Studio to support classroom assignment, individual student work, and advanced instruction
- Better integration between ANGEL, FaWeb, and TechPaths
- Conduct Technology Infrastructure Master Planning that will review current infrastructure and result in upgrade plans to support strategic initiatives and future growth. Include topics such as VoIP, wireless, cloud computing, etc. Also include plan for switches and network traffic patterns.
- Install remote backup tape system
- Add additional technology person for system support
- Implement wireless switch management software
- Increase bandwidth
- Evaluate “ownership” of computing in the future such as students providing their own equipment
- Upgrade OS on desktops to Windows 7
- Expand use of emergency alert infrastructure – collect cell phone information for student population
- Evaluate use of Google Apps and Open Office
- Evaluate the use of online textbooks
- Evaluate cloud computing and how we could utilize to support storage of digital content for students
- Standardize equipment for classrooms. Provide ability to toggle between whiteboard and computer screen
- Evaluate the need for an alternate means of connection for video conferencing to minimize impact on bandwidth

- Evaluate need for a separate secure wireless network as mobile computing emerges as a significant presence and whether we want to support access
- Review the Communications Plan and expand infrastructure to support. Consider mobile communications, calendar sync functionality, social networking and user-generated content.
- Evaluate telecommunications services plan that will support both instructional needs and administrative requirements.
- Conduct web Strategic plan that will review current infrastructure and the strategic initiatives identified in the educational, communications, and other strategic plans to support implementation and future growth. Evaluate and implement a web content management system to provide more efficient access for content providers to maintain current information and up-to-the minute resources
- Research and implement a technology solution for capturing important campus presentations and events for video and web broadcasting. Utilize new delivery models such as web-based broadcasts to deliver information such as Tartan Talks.
- Investigate technology solutions that could improve efficiencies in the technology infrastructure
- Identify key business processes in the administrative and academic areas to leverage new technologies to streamline and improves these practices
- Evaluate and implement technologies that ensure the availability of information resources
 - Evaluate and implement redundant technology infrastructure and equipment for high availability and critical services
 - Implement procedures to sustain reliable technology services in the event of a disruptive event
 - Conduct a “learn and work from home” day to evaluate procedures in the event of a disruptive event
- Develop a financial model for operations to sustain infrastructure
- Develop an IT “Green Strategy” and plan its implementation

Administrative Systems – (Key Items based on interviews)

Admissions

1. Allow families to apply online
2. Automate re-enrollment process
3. Flat Panel TV with content for visiting families to view
4. Improvement of historical reporting information
5. Utilize Netcommunity for emails to prospective families and new ones

Business Office

1. Electronic statements – provide billing online for viewing (going green)
2. Provide capability to accept debit cards for tuition, student billing payments & reenrollment deposits
3. Ability to accept credit cards using our own secure system rather than pay 3rd party service
4. Automate facility requests
5. Expand calendaring system to include facility requirements

Campus/Master Plan

1. Develop a fully built out communications infrastructure plan based on the master plan
2. Evaluate surveillance coverage and security systems – expand as needed

Advancement

1. Develop a Capital Campaign section of the website with vision, FAQs, ability to add pictures of construction
2. Alumni
 - a. ability to update demographic info
 - b. ability to purchase key SMES items online
3. Annual Fund
 - a. Annual Fund
 - b. Data updates – timing of info
 - c. Donations – ability to include on student billing
4. Outstanding Pledges – tracking – booked as receivable – payment reminders

Human Resources

1. Ability for prospective employees to apply online
2. Centralized and secure database for storing employee demographic and salary information (currently done through a combination of Blackbaud, ADP, and excel)

General

1. Protocols for markup of documents that group of teachers/staff make changes for circulation

Focus Area – Infrastructure

Goals

2009-10

1. Increase Bandwidth
2. Implement remote backup to tape and wireless switch management
3. Capital Campaign Section of Website
4. Conversion to Taleo.com for employee performance evaluations
5. Evaluate telecommunications services plan that will support instructional needs, administrative requirements, and disaster preparedness.
6. Develop a financial model for operations to sustain infrastructure

2010-11

1. Add additional technology support person
2. Continue implementation of 21C initiative
3. Implement online admission applications and reenrollment
4. Ability to accept electronic payments
5. Conduct Technology Infrastructure Master Planning that will review current infrastructure and result in upgrade plans to support strategic initiatives and future growth. Include topics such as VoIP, wireless, cloud computing, etc. Also include plan for switches, network traffic patterns, and network surveillance mechanisms in place
6. Conduct Web Infrastructure plan that will review current infrastructure and the strategic initiatives identified in the educational, communications, and other strategic plans to support implementation and future growth. Evaluate and implement a web content management system to provide more efficient access for content providers to maintain current information and up-to-the minute resources Consider mobile communications, calendar sync functionality, social networking and user-generated content.
7. Update desktops to Windows 7
8. Expand use of emergency alert infrastructure – collect cell phones for student population and conduct all school drill to operate remotely in the event of a disaster
9. Anticipate increasing demand for additional data storage and implement a solution
10. Evaluate and implement an alternate solution to FTP for accessing files stored on network storage
11. Evaluate calendaring system and expand to include facility requests/management
12. Evaluate integration solutions between Angel and Blackbaud and Techpaths
13. Develop an IT “Green Strategy” and plan its implementation

2011-12

1. Continue implementation of 21C initiative
2. Add additional technical staff to support the overall strategic communication plan
3. Evaluate “ownership” of computing in the future such as students providing their own equipment, utilizing Google Apps and Open Office, cloud computing, etc.
4. Evaluate needs for alumni and implement solutions
5. Implement integration solutions between Angel and Blackbaud and Techpaths

Focus Area - Resources and Communications

Students, staff, administrators, employees, parents, and expanded community will be able to safely interact with digital information on demand, communicate virtually as appropriate, and function efficiently and effectively in a digitally reliant community.

Objectives

- SMES website provides information to St. Margaret's community
- Provide information meetings to parents on ways to keep kids safe online and proper ethical use of the internet
- Utilization of Alert Now, a system which allows instant communication to parents in multiple ways including voice, text messaging, and work calling regarding critical information about any school situation. Can be customized by groups.
- The parent portal available over the internet gives parents real-time information regarding their student's grades, attendance, and class announcements.

Strategies

- Implement a web conferencing solution to develop content to broadcast topics. Can also be used for hosting topics specific to parents such as cyberbullying, etc.
- Expand visual and performing arts section of the website to highlight student work – (digital gallery)
- Communication to families about technology their children are using at school – big picture – develop parent seminars on tech topics.
- Standardize newsletters for Lower School teachers with the eventual goal to provide blogging for each grade
- Providing our community with an opportunity to experience what authentic learning is and what authentic teaching is
- Provide students and families with the ability to view report cards via the web – student progress, assignments, homework, etc.
- Provide families with the ability to reenroll their child for next school year using the web
- Identify and implement a technology strategy for archiving photos and other documents related to the development of the SMES campus, academic program, and community life.

Focus Area – Resources and Communication

Goals

2009-10

- Preschool Director blog
- Lower School Report cards available online
- Student Bills available online for viewing
- Provide families with a method to view and enroll students in after school programs
- Pilot the use of a “web-based” solution for capturing important campus presentations and events for video and web broadcasting, such as a webinar
- Standardize lower school newsletters

2010-11

- Expand visual and performing arts section of the website to highlight student work – (digital gallery)
- Lower School teachers blogging by grade – to replace newsletters
- Expand storage for digital content and create private video area such as “ Tartan Tube
- Implement the “web-based” solution for campus presentations
- Implement enhancements to SMES website as defined by the communications strategic plan
- Identify a technology strategy for archiving photos and other documents related to the history of SMES

2011-12

- Continue to refine and implement solutions to facilitate access to resources and enhance communications per strategic initiatives
- Implement a technology strategy for archiving photos and other documents related to the history of SMES

Appendices

Educational Technology Strategic Planning Committee Members
Network Acceptable Use Policy for Students
Network Acceptable Use Policy for Employees
ISTE NETS Standards For Students
ISTE NETS Standards For Teachers
ISTE NETS Standards For Administrators
First Year Evaluation Report – UCI – 21st Century Learning Initiative

Educational Technology Strategic Planning Committee Members

Regina McDuffie	Academic Dean and Lower School Principal
Lynn Ozonian	Director of Academic Technology
Stephanie Cole	5 th Grade Teacher
Kathy Coleman	Board of Trustees Member
Katie Desmond	Kindergarten Teacher
Sarah Drislane	Parent
James Harris	Department Chair, History
Ron Lanning	Department Chair, Foreign Language
Tait Lihme	Academic Technology Program Coordinator /5 th Grade Teacher
Darla Magana	Director of Library Services
Allison Mann	Parent
Kevin Phillips	Board of Trustees Member
Londa Posvistak	Instructional Support Specialist
Ian Thomas	Student, Class of 2009
Fari Valji	Student, Class of 2010
Dylan Wade	6 th Grade Teacher, Middle School Science
Stephanie Windes	7 th Grade Teacher, Middle School Math

SMESNet Student Acceptable Use Policy

Overview

Students are provided access to the St. Margaret's Episcopal School computer network (SMESNet) for use of shared resources, file storage, the Internet, and e-mail (6th-12th grades only). In receiving this policy, students acknowledge that they understand their responsibilities for using the SMESNet. This permission is granted on an annual basis.

Network Storage

Each student will have a folder on the SMESNet for file storage. Folders should contain only files that are academically related. The following files should not be downloaded: **.avi, .bat, .com, .iso, .exe, .mov, .mp3, .mpeg, .swf, .torrent, and .zip**. Users should back up extremely important files on their own media and scan any files for viruses before using them on home or school computers.

Network Use

Students are responsible for their actions on the SMESNet. It is expected that they will place high value on honesty, integrity, and sound moral interaction with people in all areas of their lives, including the use of the SMESNet.

1. Respect and protect your privacy and the privacy of others
 - a. Use only assigned accounts
 - b. Not view, use, or copy passwords, data, or networks to which you are not authorized.
 - c. Practice internet safety and do not post, distribute or forward private information about yourself or others without permission from that person.
2. Respect and protect the integrity, availability, and security of all technology resources.
 - a. Observe all network security practices,
 - b. Report security risks or violations to a teacher or network administrator
 - c. Not use any type of apparatus to access the school network or Internet without permission from the Technology Department
 - d. Keep all personal laptops at home even if a teacher gives permission to bring it. All school work needs to be saved in Windows format or burned onto a CD/DVD to play on school computers. Not destroy or damage data, networks, or other resources that do not belong to you without clear permission from the owner.
 - e. Not tamper with Internet filters or try to get around them for any reason, including educational purposes
 - f. Not install or make modifications to school hardware or software
 - g. Not use Internet resources that consume bandwidth, such as streaming videos from YouTube, streaming music, play list websites or playing games
3. Respect and protect the intellectual property of others
 - a. Not infringe copyrights (no making illegal copies of music, games, or movies).
 - b. Not plagiarize.
4. Respect and practice the principles of community.
 - a. Communicate in ways that are kind and respectful.
 - b. Report threatening or discomfoting material to an adult.
 - c. Not intentionally access, transmit, copy, or create material that violates the school's code of conduct (such as messages that are pornographic, threatening, rude, discriminatory, or meant to harass).
 - d. Not intentionally access, transmit, copy, or create material that is illegal (such as obscenity, stolen materials, or illegal copies of copyrighted works).
 - e. Not send spam, chain letters or other mass unsolicited mailings.
 - f. Not buy, sell, advertise, or otherwise conduct business, unless approved as a school project.

Monitoring. School and network administrators monitor the use of information technology resources to help ensure that uses are secure and in conformity with this policy. Administrators reserve the right to examine, use, and disclose any data found on the school's information networks in order to further the health, safety, discipline, or security of any student or other person, or to protect property. They may also use this information in disciplinary actions.

Consequences for Violation

Use of the SMESNet is a privilege, not a right. Inappropriate use will result in disciplinary action as determined by each school division.

SMESNet Employee Acceptable Use Policy

St. Margaret's Episcopal School (SMES) is dedicated to providing its employees with a place that encourages the use of computers and electronic information as essential tools to support the educational and business objectives of the School. Access to school-provided computer network services is meant to advance the educational goals of SMES and foster employee professional development. It is also a means to encourage educators to use computer network services in order to augment one's instructional skills, increase one's knowledge base, and have the ability to collaborate with other educators and subject-matter experts. It is then the responsibility of each employee to ensure that this technology is used for proper purposes and in a manner that does not compromise the integrity of the institution.

This policy applies to all SMES employees who have access to the School's information network (SMESNet) including all electronic mail, data files processed and/or stored, software provided, and access to the Internet.

E-MAIL POLICY

Every School employee is responsible for using the electronic mail (E-Mail) system properly and in accordance with this policy. Any questions about this policy should be addressed to the Human Resources Office.

The E-mail system is the property of the School. It has been provided by the School for use in conducting the business and educational objectives of the School. All communications and information transmitted by, received from, or stored in this system are records and property of the School. The E-mail system is to be used for School purposes and if used for personal purposes must adhere to all policies stated. Employees have no right of personal privacy in any matter stored in, created, received, or sent over the School's E-mail system.

The School, in its discretion as owner of the E-mail system, reserves and may exercise the right to monitor, access, retrieve, and delete any matter stored in, created, received, or sent over the E-mail system, for any reason and without the permission of any employee.

Even if employees use a password to access the E-mail system, the confidentiality of any message stored in, created, received, or sent from the School's E-mail system cannot be assured. Use of passwords or other security measures does not in any way diminish the School's rights to access materials on its system, or create any privacy rights of employees in the messages and files on the system. Any password used by employees must be revealed to the School as E-mail files may need to be accessed by the School in an employee's absence.

Employees should be aware that deletion of any E-mail messages or files will not truly eliminate the messages from the system. All E-mail messages are stored on a central back-up system in the normal course of data management.

Even though the School has the right to retrieve and read any E-mail messages, those messages should still be treated as confidential by other employees and accessed only the intended recipient. Employees are not authorized to retrieve or read any E-mail messages that are not sent to them. Any exception to this policy must receive the prior approval of the School's Director of IT and/or the Headmaster of the School.

The School's policies against sexual or other harassment apply fully to the E-mail system, and any violation of those policies is grounds for discipline up to and including discharge. Therefore, no E-mail messages should be created, sent, or received if they contain intimidating, hostile, or offensive material

concerning race, color, religion, sex, age, national origin, disability or any other classification protected by law.

The E-mail system may not be used to solicit for religious or political causes, commercial enterprises, outside organizations, or other non-job related solicitations.

The E-mail system shall not be used to send (upload) or receive (download) copyrighted materials, proprietary financial information, or similar materials without prior authorization from the School's Director of IT and/or the Headmaster. Employees, if uncertain about whether certain information is copyrighted, propriety, or otherwise inappropriate for transfer should resolve all doubts in favor of not transferring the information and consult the Director of IT.

Users should routinely delete outdated or otherwise unnecessary E-mails and computer files. These deletions will help keep the system running smoothly and effectively, as well as minimize maintenance costs.

Users are reminded to be courteous to other users of the system and always to conduct themselves in a professional manner. E-mails are sometimes misdirected or forwarded and may be viewed by persons other than the intended recipient. Users should write E-mail communications with no less care, judgment and responsibility than they would use for letters or internal memoranda written on School letterhead.

Any employee who discovers misuse of the E-mail system should immediately contact the Human Resources Office and/or the Director of Information Technology.

Violations of the School's E-mail policy may result in disciplinary action up to and including discharge. Employees are required to sign an E-mail and Internet policy Acknowledgment Form as a condition of employment. The form is to be signed on acceptance of an employment offer by the School.

INTERNET POLICY

The purpose of a connection to the Internet is to provide St. Margaret's Episcopal School personnel with a tool to support the business and educational objectives of the School.

This policy applies to all SMES employees, parents or students (collectively, "Users") who have access to the Internet through the School's information network.

SMESNet is the sole property of the SMES. Therefore, all Internet use must be authorized for the specific purposes of SMES. All electronic mail and/or data files processed and/or stored in SMESNet are School records and are the property of SMES.

SMES monitors and reserves the right to access and disclose for any purpose all electronic mail and data files received or sent by Users over the Internet through SMESNET.

The authority to approve Internet access and usage resides at the level of the School's Director of Information Technology. Accountability for such activities also resides at the level of the School's Director of Information Technology.

Any User approved for Internet access may connect to, view and print any Web page relating to the business and educational objectives of the School.

Information and/or messages created, stored, sent or received through SMESNet are considered SMES records and are subject to access and review by the School's management and authorized Information Technology ("IT") personnel.

Deliberately performed acts that waste School resources or impair the User's own or other User's productivity are prohibited.

It is also prohibited to connect and/or download information from Web sites that relate to pornography, illegal drugs, illegal activities, violence, hate speech, on-line gambling, or offensive humor without the

express written consent of the following three individuals: the School's Director of IT, the Principal of the School concerned, and the Headmaster.

Web sites that offer continuous and automatic "ticker" type updates to the User desktop (i.e., stock prices, sports scores, news, etc.) must not be accessed or used unless the use is for School business or educational purposes.

All information transmitted or received through the Internet must be for the purpose of conducting School business or educational activities and contain information useful to the User for the accomplishment of legitimate School business or educational related tasks.

A. File Transfer Protocol (FTP) Downloads

Caution must be given to the size of the files to be downloaded. At no time shall any file be downloaded to any of the network servers. Files shall be downloaded to the work station's hard drive C:/temp and scanned for viruses using approved IT virus scanning software before storing on network drives or launching from the appropriate application software.

It is prohibited to download any Beta software programs, freeware, or software upgrades, or other software of any kind without written approval from the School's Director of Information Technology.

B. Observance of Internet Protocol

Users by virtue of receiving Internet access, agree to be held liable for their actions.

Users must only use services authorized for access by the School.

Users must respect and comply with copyright laws. Unauthorized copies of copyrighted material may not be created, distributed, or knowingly used by Users.

Users shall observe all generally accepted "net" protocol. This applies to all internal and external communications, mass-unsolicited-e-mail distributions (which are prohibited), advertising on discussion boards/newsgroups (overt, direct ads are prohibited), language and other items.

When using the Internet, Users must compose messages in a courteous and respectful manner.

Insulting, offensive, disrespectful, demeaning, or sexually suggestive language will not be tolerated. Sexual or ethnic slurs and/or harassment of any form will not be tolerated.

Obscenities or any representation of obscenities, commonly referred to as "flaming," are prohibited.

C. Electronic Procurements

Users shall not use the SMESNet for any procurements. Proprietary or confidential information may not be transmitted on the Internet. In accordance with State and Federal laws, any attempt to access unauthorized internal and/or external resources is prohibited.

Records generated as a result of accessing the Internet will be kept for the duration of a User's affiliation with the School. All records generated by the School will be forwarded to IT for filing.

I. User employee responsibility:

- 1) Provide reasonable business or educational justification on demand for access to the Internet.
- 2) Read, sign and return the Internet Policy Acknowledgement Form to Human Resources.
- 3) Represent the School in a professional manner at all times while on the Internet.
- 4) The Internet shall be used only for authorized purposes.
- 5) Represent only yourself; never someone else.
- 6) Information about, or lists of, School Users shall not be provided to others.
- 7) When use of the Internet interferes with completion of daily tasks or the tasks of other Users, cease use.

- 8) Report any issues involving the School on the Internet to the School's Director of Information Technology.
- 9) Report immediately any violation of security to the School's Director of Information of Technology.
- II. School Management responsibilities:
 - 1) Communicate any violations or discrepancies to Internal Audit and Human Resources supervision.
 - 2) Implement systems to monitor use of the Internet through the SMESNet.
- III. Information Technology responsibility:
 - 1) Provide connectivity to the Internet.
 - 2) Provide necessary software tools and standards.
- IV. Human Resources responsibility:
 - Provide counsel to Management on possible misuse of the Internet and/or the SMESNet.

Access

This policy will be made available to any person granted access to the Internet through SMESNet. All Users are required to sign an agreement that states willingness to abide by the policies and procedures set by the School.

Users granted access to the Internet agree to abide by and use software standards outlined.

E-Mail and Internet Policy Acknowledgment Form

I acknowledge that I have received a copy of St. Margaret's Episcopal School's E-mail and Internet Policy. I agree to read it thoroughly, and agree that if there is any policy or provision in the policy I do not understand, I will seek clarification from the Human Resources Office.

I understand that my use of the School's E-mail system constitutes my consent to all terms and conditions of that policy.

In particular, I understand that (1) the E-mail system and all information transmitted by, received from, or stored in that system are the property of the School, (2) the system is to be used primarily for business purposes, and (3) I have no expectation of privacy in connection with the use of the E-mail system or the Internet or with the transmission, receipt, or storage of information in that system. I agree not to use a code, access a file, or retrieve stored communications unless authorized. I acknowledge and consent to the School's monitoring my use of the E-mail system and the Internet at any time at its discretion, including printing and reading all E-mails entering, leaving, or stored in the system.

Signature

Date

NETS for Students

1. Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

- a. apply existing knowledge to generate new ideas, products, or processes.
- b. create original works as a means of personal or group expression.
- c. use models and simulations to explore complex systems and issues.
- d. identify trends and forecast possibilities.

2. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
- b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- c. develop cultural understanding and global awareness by engaging with learners of other cultures.
- d. contribute to project teams to produce original works or solve problems.

3. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

- a. plan strategies to guide inquiry.
- b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- d. process data and report results.

4. Critical Thinking, Problem Solving, and Decision Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students:

- a. identify and define authentic problems and significant questions for investigation.
- b. plan and manage activities to develop a solution or complete a project.
- c. collect and analyze data to identify solutions and/or make informed decisions.
- d. use multiple processes and diverse perspectives to explore alternative solutions.

5. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

- a. advocate and practice safe, legal, and responsible use of information and technology.
- b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
- c. demonstrate personal responsibility for lifelong learning.
- d. exhibit leadership for digital citizenship.

6. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:

- a. understand and use technology systems.
- b. select and use applications effectively and productively.
- c. troubleshoot systems and applications.
- d. transfer current knowledge to learning of new technologies.

NETS for Teachers

1. Facilitate and Inspire Student Learning and Creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments. Teachers:

- a. promote, support, and model creative and innovative thinking and inventiveness.
- b. engage students in exploring real-world issues and solving authentic problems using digital tools and resources.
- c. promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes.
- d. model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments.

2. Design and Develop Digital-Age Learning Experiences and Assessments

Teachers design, develop, and evaluate authentic learning experiences and assessment incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS•S. Teachers:

- a. design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity.

develop technology-enriched learning environments that enable all students to pursue their individual curiosities and
- b. become active participants in setting their own educational goals, managing their own learning, and assessing their own progress.
- c. customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources.
- d. provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching.

3. Model Digital-Age Work and Learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society. Teachers:

- a. demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations.
- b. collaborate with students, peers, parents, and community members using digital tools and resources to support student success and innovation.
- c. communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital-age media and formats.
- d. model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning.

4. Promote and Model Digital Citizenship and Responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices. Teachers:

- a. advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources.
- b. address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources.
- c. promote and model digital etiquette and responsible social interactions related to the use of technology and information.

develop and model cultural understanding and global awareness by engaging with colleagues and students of other
- d. cultures using digital-age communication and collaboration tools.

5. Engage in Professional Growth and Leadership

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources. Teachers:

- a. participate in local and global learning communities to explore creative applications of technology to improve student learning.
- b. exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others.
- c. evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning.
- d. contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community.

Nets for Administrators 2009

1. Visionary Leadership

Educational Administrators inspire and lead development and implementation of a shared vision for comprehensive integration of technology to promote excellence and support transformation throughout the organization. Educational Administrators:

- a. inspire and facilitate among all stakeholders a shared vision of purposeful change that maximizes use of digital-age resources to meet and exceed learning goals, support effective instructional practice, and maximize performance of district and school leaders.
- b. engage in an ongoing process to develop, implement, and communicate technology-infused strategic plans aligned with a shared vision.
- c. advocate on local, state and national levels for policies, programs, and funding to support implementation of a technology-infused vision and strategic plan.

2. Digital Age Learning Culture

Educational Administrators create, promote, and sustain a dynamic, digital-age learning culture that provides a rigorous, relevant, and engaging education for all students. Educational Administrators:

- a. ensure instructional innovation focused on continuous improvement of digital-age learning.
- b. model and promote the frequent and effective use of technology for learning.
- c. provide learner-centered environments equipped with technology and learning resources to meet the individual, diverse needs of all learners.
- d. ensure effective practice in the study of technology and its infusion across the curriculum.
- e. promote and participate in local, national, and global learning communities that stimulate innovation, creativity, and digital-age collaboration.

3. Excellence in Professional Practice

Educational Administrators promote an environment of professional learning and innovation that empowers educators to enhance student learning through the infusion of contemporary technologies and digital resources. Educational Administrators:

- a. allocate time, resources, and access to ensure ongoing professional growth in technology fluency and integration.
- b. facilitate and participate in learning communities that stimulate, nurture and support administrators, faculty, and staff in the study and use of technology.
- c. promote and model effective communication and collaboration among stakeholders using digital-age tools.
- d. stay abreast of educational research and emerging trends regarding effective use of technology and encourage evaluation of new technologies for their potential to improve student learning.

4. Systemic Improvement

Educational Administrators provide digital-age leadership and management to continuously improve the organization through the effective use of information and technology resources. Educational Administrators:

- a. lead purposeful change to maximize the achievement of learning goals through the appropriate use of technology and media-rich resources.
- b. collaborate to establish metrics, collect and analyze data, interpret results, and share findings to improve staff performance and student learning.
- c. recruit and retain highly competent personnel who use technology creatively and proficiently to advance academic and operational goals.
- d. establish and leverage strategic partnerships to support systemic improvement.
- e. establish and maintain a robust infrastructure for technology including integrated, interoperable technology systems to support management, operations, teaching, and learning.

5. Digital Citizenship

Educational Administrators model and facilitate understanding of social, ethical and legal issues and responsibilities related to an evolving digital culture. Educational Administrators:

- a. ensure equitable access to appropriate digital tools and resources to meet the needs of all learners.
- b. promote, model and establish policies for safe, legal, and ethical use of digital information and technology.
- c. promote and model responsible social interactions related to the use of technology and information.
- d. model and facilitate the development of a shared cultural understanding and involvement in global issues through the use of contemporary communication and collaboration tools.

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UCI First Year Evaluation Report - 21st Century Learning Initiative

Prepared by

Dr. Mark Warschauer Department of Education University of California, Irvine

and

Melissa Courtney Department of Education University of California, Irvine

With the assistance of Nick Zaiei

July 14, 2009

This is an extract of the summary, evaluation process, and conclusion from original report

Summary

St. Margaret's Episcopal School in Orange County, California launched a 21st Century ("21c") skills based reform in all sixth grade subject areas and in eighth grade history classes in the 2007-2008 school year. Due to the success of that pilot program, the administration continued the reform during the 2008-2009 school year by spreading the effort to all seventh grade teachers and to ninth grade science and history teachers. The program was well received by the participating faculty and students. The teachers began to redesign the curriculum and instruction and broaden their educational goals. Many teachers have found strong links between their professional backgrounds, beliefs, and the goals and methods of the 21c curriculum. Meanwhile students have taken positive note of the changes and are in support of them.

The school's decision to continue the program and expand more quickly than previously anticipated is merited by the enthusiasm participating teachers have shown. The school still faces the challenge of maintaining the quality of the professional development for the initiative as the program expands, especially in an era of shrinking budgets.

Introduction

The 21st Century Learning movement promotes the use of innovative teaching techniques and standards to prepare students for the ongoing shift from an industrial economy to a knowledge economy. New learning standards developed by the broad based Partnership for 21st Century Skills have been officially adopted by state education standards in Arizona, Kansas, Maine, Massachusetts, New Jersey, North Carolina, South Dakota, West Virginia, and Wisconsin. These include a broad array of life and career skills; learning and innovation skills; and information, media, and technology skills.

St. Margaret's Episcopal School has launched its own multi-faceted reform inspired by the 21st Century movement. At St. Margaret's, the reform entails a combination of the broader 21st Century Learning Skills with an approach to curriculum reform known as Understanding by Design. This latter initiative involves focused planning efforts by teachers to ensure that students are developing deep understanding of the most important issues.

The reform effort at St. Margaret's began in 2007-2008 with five sixth grade teachers and two eighth grade social science teachers involved in professional development focusing on 21c and Understanding by Design. As part of the planned expansion of the reform effort, all seventh grade and some ninth grade teachers participated during the 2008-2009 school year in quarterly professional development workshops and release days.

The St. Margaret's program includes professional development, a restructuring of assessment and reporting, an increase in teacher collaboration, and the introduction of curriculum mapping software. The reform reflects a larger movement within and outside the school toward student self-evaluation, student-centered learning, and research-based change.

This report constitutes an evaluation of the second-year implementation of the reform project.

Evaluation Methodology

In January 2008, a team from the Department of Education at the University of California, Irvine (UCI), under the leadership of Dr. Mark Warschauer, was invited by the school to evaluate the 21c Learning Initiative. The evaluation team (listed at the end of this report) included one professor of education, one UCI doctoral student, and one undergraduate researcher.

The team was given full access to the Middle and Upper School, including the opportunity to observe any class in the program and interview any teacher or student (pending the permission of the teacher and of the student and parent, consent for which was always granted).

A purposeful sample of seven seventh and ninth grade teachers participated in certain aspects of the qualitative part of the study. The observation sample consists of one seventh grade teacher from each of the five core subjects and two ninth grade teachers, one history and one science. The teachers were chosen due to their permanent teaching status and willingness and availability to participate.

The following data were collected and analyzed in completion of the evaluation:

(1) *Teacher Interviews.* Six semi-structured teacher interviews were conducted using an interview protocol divided into three sections: Personal History & Beliefs, Experiences Implementing 21c, and Overall Opinions about 21c. Interviewees were assured that their comments would be kept anonymous. All interviews were audio-recorded and transcribed. The interviews were conducted over one to two one-hour sessions.

(2) *Observations.* An average of 15 blocks of classes was observed for each of the seven teachers. Observations of the teachers during their instruction took place once a week during a single block. The same field researcher also conducted observations of eight 21c professional development workshops and two 21c teacher release days.

(3) *Documents.* The teachers supplied electronic and paper copies of their rubrics, lectures slides, assessments, and planning documents. The teachers also allowed access to their class websites from the school's learning management system, Angel. Handouts and other documents were also collected during the professional development sessions.

(4) *Student Focus Groups.* Four student focus group interviews were held with a total of 15 seventh grade and one eighth grade students participating. The first focus group consisted of four students selected by the researcher. The second group consisted of four students selected by the teachers, which included one eighth grade student. The final two focus groups consisted of two sets of four students chosen at random from participating seventh grade classes. Each group met for half an hour at lunch. The students were asked about their knowledge of the 21c initiative and the impact it has had on their attitude toward school.

To carry out data analysis, all the interview transcripts and observation field notes were entered into a qualitative data analysis software program (HyperResearch). Teacher interviews were coded for the teacher's evaluation of the initiative and beliefs about teaching. These beliefs were compiled into graphical models, which were crosschecked with the classroom observations. Finally, the teachers were asked to give feedback on the graphical model and the graphical model was finalized based on this feedback. The evaluation codes were organized into themes that emerged from the data, including pacing of roll out, teacher assessment, relationships with administrators and colleagues, and fear of losing the program.

Conclusion

In 2008-2009 St. Margaret's Episcopal School expanded its 21st Century skills reform initiative, involving all seventh grade teachers and ninth grade science and history teachers. The initiative has been very successful in obtaining teacher buy-in. The administration successfully encouraged an environment that is safe for experimentation with new curriculum and instructional strategies. Better clarity from the administration about the goals and components of the reform, and more administrative cohesion in carrying out the reform, can help ensure its success. Improved formative evaluation of teachers by administrators involved in the reform will be helpful as well.

Though budget concerns are looming, the reform should continue as it has helped launch St. Margaret teachers on a path toward more self-reflection, positive curriculum revision, and improved teaching and assessment, in line with the needs of student success in the 21st century. The administration plans to continue the reform expanding into the entire Middle School and working more with the Upper and Lower Schools. We endorse these expansion efforts. The administration, faculty, parents, and students are encouraged to continue working together so as to carry forward with this important initiative.

About the Evaluators

Mark Warschauer is a Professor in the Department of Education and Informatics at the University of California, Irvine, director of UCI's Ph.D. in Education program, and founding director of UCI's Digital Learning Lab. Dr. Warschauer's research focuses on the integration of information and communication technologies (ICT) in schools and community centers; the impact of ICT on language and literacy practices; and the relationship of ICT to institutional reform, democracy, and social development. His most recent book, *Laptops and Literacy: Learning in the Wireless Classroom*, was published by Teachers College Press in 2006. His previous books have focused on the development of new electronic literacies among culturally and linguistically diverse students; on technology, equity, and social inclusion; and on the role of ICT in second language learning and teaching. He is now engaged in a research project on technology, human development, and out-of-school learning.

Melissa Courtney is a Ph.D. student in Education at the University of California, Irvine. Her research focuses on technology in education and modeling cognitive development.

Dr. Warschauer and Ms. Courtney were assisted in this evaluation project by Nick Zaiei, Undergraduate Research Assistant.

Contact: Mark Warschauer Department of Education 2001 Berkeley Place University of California, Irvine Irvine, California, 92697-5500 tel: 949 824-2526 fax: 949 824-2965 e-mail: markw@uci.edu Web: <http://www.gse.uci.edu/markw>