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Technology Resources and Support Webpage

**Setting/Context**

This capstone project will be completed at Lakeside Middle School. Lakeside is located in suburban Atlanta in Forsyth County. The school enrolls 1050 students in grades six through eight. Lakeside's demographics are as follows: 76% white, 11% Hispanic, 7% Asian, 4% multi-racial, and 2% black. Forsyth County is one of the wealthiest and least ethnically diverse school systems in Georgia. The school system is made up of 20 elementary schools, nine middle schools, five high schools, and one online virtual school. 38,969 students attended Forsyth County schools in the 2013-2014 school year. Our performance on the statewide Criterion Referenced Competency Test is consistently among the highest in Georgia.

The Forsyth County school system is also recognized as a state and national leader for technology integration. Classrooms in each school in our district are equipped with classroom computers, an interactive whiteboard, a ceiling mounted projector, and a sound system. Each school employs an Instructional Technology Specialist who is tasked with helping teachers use classroom technology to engage students in asking questions and choosing tools to facilitate real-world problem-solving. Additionally, Lakeside is also a BYOT school. While in the building students can access the school’s wireless network on their own devices.

In spite of this good fortune many of my colleagues have suggested that the district may not be optimizing its position and affluence. There is a disconnection between access and implementation when gaged by how these equipment and tools trickle down to the individual classrooms. For example, it’s great to have BYOT, but these devices are effectively useless when the lack of bandwidth on the school network makes internet connectivity spotty and slow. Likewise, access to content rich educational software like Safari Montage, BrainPop, and Discovery Education is a wonderful asset, but these programs are often rendered unusable due to lack of memory or outdated processors in school computers. As these problems continue year after year, many teachers have shied away from using technology because of its unreliability. By “swearing off” technology they have separated themselves from a potentially rich resource of student learning, and their technology skills have withered as a consequence. Adding to this deficit, most of our professional learning related to technology integration has been devoted to training faculty to use our new learning management system, our third LMS in six years. Usually, these technology sessions cater to bringing the teachers on the lower end of the skill range up to speed on basic functions like entering grades in the electronic gradebook or managing the calendar in Outlook. Practically no time is devoted to classroom integration of technology as a means to improve student engagement, learning, and higher order thinking. On a positive note, our school is purchasing all new computers equipped with more memory, a faster processors, and a faster, more functional operating system.

**Capstone Problem and Rationale:**

Educational reformers are demanding classroom technology integration as a means to improve student performance. To meet these demands it is no longer acceptable to suggest that teachers’ low-level and inappropriate uses of technology are adequate enough to meet the needs of the 21st century learner. The National Center for Educational Statistics offers a list of categories related to teacher competencies related to instructional technology. In their report titled *Technology in schools: suggestions, tools, and guidelines for assessing technology in elementary and secondary education* teachers should be able to access information on instructional resources, communicate with colleagues or other professionals, create instructional materials/tasks or visuals, download curriculum materials from the Internet, access libraries or resources online, participate in collaborative projects with remote classrooms or teachers, publish instructional materials on the Internet, and communicate electronically with parents. The International Society for Technology in Education offers up an even more comprehensive list of standards which teachers should possess that will allow them to engage their students, improve learning environments, and improve their own professional practice. These are clear indications that stakeholders have issued a technology call to arms due to unsatisfactory technology integration in the classroom.

Research studies have provided evidence that the lack of effective technology integration is caused by inadequate training and staff development, teachers’ lack of knowledge of how to integrate technology into the curriculum, teacher pedagogical beliefs, teacher self-efficacy, access to equipment, time to learn technologies, and administrative support. (Tweed, 2013; Ertmer & Ottenbreit-Leftwich, 2010; Fabry & Higgs, 1997) To be fair, school leaders are faced with the challenge of providing suitable training to bring all teachers to a satisfactory level of technical expertise so learning goals can be met. However, since the level of technical expertise among the faculty in our school varies, professional learning usually caters to the technologically limited, who struggle to implement basic computerized tasks. Among the moderately skilled teachers in my building, the primary obstacle to technology integration is a lack of technical support, or more specifically, “just in time” technical support. These teachers often abandon well planned, technology infused lessons when they run into technology related problems that might be easily solved with quick access to a tutorial or trouble shooting schematic.

The tech savvy teachers also face challenges when implementing technology into their classrooms, even though these individuals are often the “go to” people in the building for technology and computer related assistance. These individuals need to be made aware of the possibilities and potentials that technology can offer to enhance their teaching and their students’ learning. They need to be made aware of the software programs and applications available, and how to implement them in their content area in engaging, authentic ways.

For these reasons, an easily navigable, visually appealing “technology” website should be created. This website will function as repository of resources, tutorials, and web applications supporting the needs of those with limited computer skills, novices, and experts. The website will have three main sections: 1) Technical Support, 2) Classroom Technology Integration, and 3) Core Competencies.

**Objectives/Deliverables**

* Create a technology survey assessing the technology needs of school faculty. (Sample questions appear in appendix)
* Create a technology website designed specifically for the faculty and staff of Lakeside Middle School
* Provide video tutorials, downloadable troubleshooter checklists, and visual schematics for routine technology related tasks
* Provide a comprehensive list and description of technologies available to our teachers, and how they may be integrated in their classes
* Create a forum where teachers will be able to share their ideas related to technology integration and best practices
* Create module based lessons on core competencies for teachers to self-assess, learn, and evaluate their knowledge of instructional technology

**PSC Standards**

* Teaching, Learning, and Assessments: technology coaches assist teachers in using technology effectively for assessing student learning, differentiation instruction, and providing rigorous, relevant, and engaging learning experiences for all students.

1. Coach teachers in and model design and implementation of technology-enhanced learning experiences addressing content standards and student technology standards
2. Coach teachers in and model design and implementation of technology-enhanced learning experiences using a variety of research-based, learner-centered instructional strategies and assessment tools to address the diverse needs and interests of all students
3. Coach teachers in and model design and implementation of technology-enhanced learning experiences emphasizing creativity, higher-order thinking skills and processes, and mental habits of mind (e.g., critical thinking, meta-cognition, and self-regulation)
4. Coach teachers in and model incorporation of research-based best practices in instructional design when planning technology-enhanced learning experiences

* Digital Age Learning Environments: technology coaches create and support effective digital-age learning environments to maximize the learning of all students.

1. Maintain and manage a variety of digital tools and resources for teacher and student use in technology-rich learning environments
2. Coach teachers in and model use of online and blended learning, digital content, and collaborative learning networks to support and extend student learning as well as expand opportunities and choices for online professional development for teachers and administrators
3. Collaborate with teachers and administrators to select and evaluate digital tools and resources that enhance teaching and learning and are compatible with the school technology infrastructure
4. Use digital communication and collaboration tools to communicate locally and globally with students, parents, peers, and the larger community

* Professional Development and Program Evaluation: technology coaches conduct needs assessments, develop technology-related professional learning programs and evaluate the impact on instructional practice and student learning.

1. Conduct needs assessments to inform the content and delivery of technology-related professional learning programs that result in a positive impact on student learning
2. Design, develop, and implement technology-rich professional learning programs that model principles of adult learning and promote digital-age best practices in teaching, learning, and assessment
3. Evaluate results of professional learning programs to determine the effectiveness on deepening teacher content knowledge, improving teacher pedagogical skills and/or increasing student learning

* Digital Citizenship: technology coaches model and promote digital citizenship

1. Model and promote strategies for achieving equitable access to digital tools and resources and technology-related best practices for all students and teachers
2. Model and facilitate safe, healthy, legal, and ethical uses of digital information and technologies
3. Model and promote diversity, cultural understanding, and global awareness by using digital-age communication and collaboration tools to interact locally and globally with students, peers, parents, and the larger community

* Content Knowledge and Professional Growth: technology coaches demonstrate professional knowledge, skills, and dispositions in content, pedagogical, and technological areas as well as adult learning and leadership and are continuously deepening their knowledge and expertise.

1. Engage in continual learning to deepen content and pedagogical knowledge in technology integration and current and emerging technologies necessary to effectively implement the NETS\*S and NETS\*T
2. Engage in continuous learning to deepen professional knowledge, skills, and dispositions in organizational change and leadership, project management, and adult learning to improve professional practice
3. Regularly evaluate and reflect on their professional practice and dispositions to improve and strengthen their ability to effectively model and facilitate technology-enhanced learning experiences

**Project Description**

A. Narrative

Beginning in August my school is being equipped with all new computers. These machines will be loaded with much more memory and a more advanced operating system than our previous computers. While the new technology offers assurances in the form of reliability, more functional multitasking, and quicker downloads, I anticipate many challenges as teachers adapt to their new machines. Our school ITS will be required to manage this transition and will be spending much his workday dealing with hardware and installation issues. I will be able to at least partially alleviate some of the technology challenges we will face by creating the Lakeside Technology website. The contents of this website will be organized in three sections: 1) Technical Support, 2) Classroom Technology Integration, and 3) Core Competencies. I will conduct a needs assessment early in the year to determine which areas our faculty members need assistance.

The Technical Support section will contain a regularly updated list of commonly occurring technology related questions and answers that our school Instructional Technology Specialist has typically managed on a case by case basis or through a school wide email. Topics in this section will range from the very simple (like changing your password), to slightly more complicated (like a visual step-by-step guide to setting up your computer, DVD player, telephone, and projector), to the very complex (setting up the electronic gradebook). This section will be easily navigable so any teacher will be able to quickly access their desired information, thus eliminating the need to “find that email” John sent last year about how to …… etc.

Classroom Technology Integration will provide a comprehensive list of technologies available to our teachers, and how they may be integrated in their classes in ways that move beyond the Literacy and Adapting levels on Grappling’s Spectrum to Transforming levels. Our district includes the Grappling’s Spectrum in its current technology plan, so it makes sense to use this as a rubric in our own building. This section will maintain a list of subscription services and free web based services. Each entry will be summarized for its utility and examples will be provided about how they can be integrated into the classroom. This information is at the heart of 21st century teaching and learning, and will address issues related to changes in pedagogy with the goal of engaging students through project based activities and authentic learning tasks. Teachers will have the opportunity to share ideas and engage in dialogue about how they may use these technologies.

The Core Competencies section will introduce the NETS standards for teachers and will offer tutorials and assessments on basic productivity tools including Microsoft applications, our school’s current Learning Management System, our current Student Information System, and our current Student Assessment Platform. In this section, teachers will self-assess their abilities with each of these technologies, receive individualized support to improve their competency, and have the opportunity to show what they know through the completion of assessments. It is not clear yet how teachers will be incentivized to complete the assessments. Possibilities range from administrative mandate to “jeans” passes to “duty free” lunch.

Upon completion of the website, training sessions will be conducted to preview the website for teachers in my school. Once the website is complete and the teacher training conducted a follow-up survey will be issued to judge the success of the website and if it meets the needs of our faculty and staff.

B. Timeline:

|  |  |
| --- | --- |
| August 2014 | Create Survey |
| September 2014 | Issue Survey to teachers and gather data |
| September 2014 – February 2015 | Create Website |
| February 2015 – April 2015 | Conduct professional Development for teachers on the use of Website |
| May 2015 | Project Evaluation. Issue Follow-up survey and gather data to judge the success of the website. Make necessary changes for the following school year. |

C. Resources:

* Computer
* Internet Access
* Account with a web based survey provider
* Access to YouTube
* Permission from administration to conduct surveys and conduct the professional development when finished with website

**Evaluation Plan**

To determine if the objectives for this project have been met a professional development session will be held with the teachers in the school. (See timeline above for approximate date) An anonymous web based questionnaire will be conducted to allow participates to honestly express their beliefs and opinions about the usefulness of the website. Sample questions for this evaluation survey are as follows:

How often did you access www.LakesideTechnology.com?

What was your primary purpose for visiting the site? Check all that apply

🞎 Technical Support related to Its Learning

🞎 Technical Support related to Infinite Campus

🞎 Technical Support Related to your computer/s

🞎 Technical Support Related to classroom projectors

🞎 Technical Support Related to Outlook

🞎 Technical Support Related to telephone/voice mail

🞎 Technical Support Related to Learning Station

🞎 Technical Support related to licensed educational software (Safari Montage, BrainPop, netTrekker, Discovery Education, Wikispaces, digital textbooks, or Study Island)

🞎 Technical Support related to web browsers and the internet, including internet connectivity

🞎 Information on web based applications and websites

🞎 Information integrating technology in the classroom

🞎 Basic Computer Tutorials

Was there any technology related information you needed but were unable to locate on www.LakesideTechnololgy.com?

Did you share any ideas related to technology integration on the website’s discussion forum?

What suggestions do you have to improve www.LakesideTechnology.com?

This type of evaluation method offers two benefits. First the questions directly relate to the module objectives. In effect, the website is the objective. Also, by asking teachers to evaluate the site’s efficacy and offer suggestions for improvement, the site can live on in perpetuity, and continually be updated as technology evolves and the needs of our teachers change.

**Appendix**

Beginning of year teacher technology survey:

Sample Questions

1) How often do you use Discovery Education in your classroom?

2) How often do you use Safari Montage in your classroom?

3) How often do you use BrainPop in your classroom?

4) How often do you use Wikispaces in your classroom?

5) How often do you use the internet in your classroom?

6) On a scale of 1-5 with 5 being the most comfortable, how comfortable do you feel with learning new technology programs?

7) On a scale of 1-5, with 5 being the most able, rate yourself on your familiarity and ability to use the following:

Microsoft Word

Microsoft Excel

Microsoft Powerpoint

Microsoft Outlook

Google Docs

Google Forms

Wikispaces

Wordle

Glogster

Prezi

Popplet

Padlet

Blog software

Website creation

iPad

Kindle

Voice Thread

Audacity

Animoto

IMovie

Socrative

Quizzlet

8) List any software applications or web tools not listed above that you would like more information about.

9) List any software applications or web tools you are familiar with and would like to share with other teachers at Lakeside.

10) List any topic or concern related to any aspect of technology that you would like information about.

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