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Implementing Web Tools in an Elementary Classroom Setting

CAPSTONE PROPOSAL
Master's Degree in Instructional Technology

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Advisor Name:	Dr. Traci Redish
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Capstone Title:	Implementing Web Tools in an Elementary Classroom Setting
Is this a Capstone Project or Study?	Project
Client Name & Description	Austell Intermediate School – A Title I elementary school with grades 2 through 5

1. CAPSTONE PROBLEM OR NEED

Austell Intermediate School's teachers have access to many technological resources. These resources include LCD projectors, SmartBoards, 3 to 4 computers in each classroom, laptops assigned to teachers, two stationary computer labs, a laptop cart, a wireless internet connection, iRespond systems, and scanners. While there are many opportunities to increase technology use with students, most teachers focus on creating and implementing interactive lessons via SmartBoards and SmartBoard technology. This is commendable and a practice that should continue, but teachers are not using *all* resources to their highest capacity. It should be noted that students should also get the opportunity to access technology that is available to them at home and at school, and, ultimately, technology they will use more and more as they become citizens of the 21st century. Teachers do not look beyond the technology that is already set up in their classrooms. Classroom computers, computer labs, and the laptop cart could be more effectively used if teachers were aware of web tools and how they can be used for classroom productivity and to support engagement in student learning. Some teachers are aware of common web tools but are unsure how to apply these tools to their classroom. Austell Intermediate students need more meaningful opportunities to use Internet tools while learning content-based standards; therefore, Austell Intermediate teachers would benefit from professional learning that focused on the implementation of web tools in the elementary classroom setting.

2. CAPSTONE DESCRIPTION

The purpose of my capstone project is to develop a professional learning community that will provide teachers with resources for implementing web tools in their classroom.This capstone

project will consist of training sessions that focus on the implementation of web tools in the elementary setting. Each training session will last approximately an hour long and will consists of an overview or tutorial on using a web tool, how to best implement the tool within the classroom, and time to explore the tool in a supervised capacity so questions can be asked as needed. Possible lesson plan ideas will also be shared and discussed within each session. This professional learning opportunity is tentatively scheduled for Fridays and will continue every other week from January to May. The tentative dates are as follows: January 13th, January 27th, February 3rd, February 17th, March 2nd, March 16th, March 30th, April 13th, April 27th, and May 11th. From the training sessions, teachers will "walk away" with a tutorial based on each web tool that can be a reference tool for future use. Materials from the course will also be placed in a wiki that staff members can reference and add to as they develop their own experience with web tools. Teachers will also complete a pre- and post- survey to assess the teachers' learning and the impact of capstone on the student learning environment.

List of Activities:

- Training Sessions (10 Total)
- Creation of Training Sessions (Including PowerPoints, Tutorials, Lesson Plan Ideas, etc...)
- Construction of Web Tools Wiki Based on Training Sessions
- Research/Professional Reading Based on Classroom Implementation of Web Tools
- Implementation of Lesson Plan Ideas Within My Own Classroom (To create student samples)
- Creation of Survey for Assessment

List of Deliverables:

- Web Tool Tutorial Handouts (Created for Each Tool Discussed)
- PowerPoint Presentations for Each Session (18 Total)
- Web Tools Wiki

3. STANDARDS

PSC
Instructional Technology Standards

Standard 1: Visionary Leadership
Candidates demonstrate the knowledge, skills, and dispositions to inspire and lead the development and implementation of a shared vision for the effective use of technology to promote excellence and support transformational change throughout the organization.

Element 1.1 Shared Vision
Candidates facilitate the development and implementation of a shared vision for the use of technology in teaching, learning, and leadership.

Element 1.4 Diffusion of Innovations & Change
Candidates research, recommend, and implement strategies for initiating and sustaining technology innovations and for managing the change process in schools.

Standard 2: Teaching, Learning, & Assessment
Candidates demonstrate the knowledge, skills, and dispositions to effectively integrate technology into their own teaching practice and to collaboratively plan with and assist other educators in utilizing technology to improve teaching, learning, and assessment.

Element 2.1 Content Standards & Student Technology Standards
Candidates model and facilitate the design and implementation of technology-enhanced learning experiences aligned with student content standards and student technology standards.

Element 2.2 Research-Based Learner-Centered Strategies
Candidates model and facilitate the use of research-based, learner-centered strategies addressing the diversity of all students.

Element 2.3 Authentic Learning
Candidates model and facilitate the use of digital tools and resources to engage students in authentic learning experiences.

Element 2.4 Higher Order Thinking Skills
Candidates model and facilitate the effective use of digital tools and resources to support and enhance higher order thinking skills (e.g., analyze, evaluate, and create); processes (e.g., problem-solving, decision-making); and mental habits of mind (e.g., critical thinking,

creative thinking, metacognition, self-regulation, and reflection).

Element 2.5 Differentiation
Candidates model and facilitate the design and implementation of technology-enhanced learning experiences making appropriate use of differentiation, including adjusting content, process, product, and learning environment based upon an analysis of learner characteristics, including readiness levels, interests, and personal goals.

Element 2.6 Instructional Design
Candidates model and facilitate the effective use of research-based best practices in instructional design when designing and developing digital tools, resources, and technology-enhanced learning experiences.

Element 2.7 Assessment
Candidates model and facilitate the effective use of diagnostic, formative, and summative assessments to measure student learning and technology literacy, including the use of digital assessment tools and resources.

Element 2.8 Data Analysis
Candidates model and facilitate the effective use of digital tools and resources to systematically collect and analyze student achievement data, interpret results, communicate findings, and implement appropriate interventions to improve instructional practice and maximize student learning.

Standard 3: Digital Learning Environments
Candidates demonstrate the knowledge, skills, and dispositions to create, support, and manage effective digital learning environments.

Element 3.1 Classroom Management & Collaborative Learning
Candidates model and facilitate effective classroom management and collaborative learning strategies to maximize teacher and student use of digital tools and resources.

Element 3.2 Managing Digital Tools and Resources
Candidates effectively manage digital tools and resources within the context of student learning experiences.

Element 3.5 Basic Troubleshooting
Candidates troubleshoot basic software and hardware problems common in digital learning environments.

Element 3.6 Selecting and Evaluating Digital Tools & Resources
Candidates collaborate with teachers and administrators to select and evaluate digital tools and resources for accuracy, suitability, and compatibility with the school technology infrastructure.

Element 3.7 Communication & Collaboration

Candidates utilize digital communication and collaboration tools to communicate locally and globally with students, parents, peers, and the larger community.

Standard 4: Digital Citizenship & Responsibility
Candidates demonstrate the knowledge, skills, and dispositions to model and promote digital citizenship and responsibility.

Element 4.1 Digital Equity
Candidates model and promote strategies for achieving equitable access to digital tools and resources and technology-related best practices for all students and teachers.

Element 4.2 Safe, Healthy, Legal & Ethical Use
Candidates model and facilitate the safe, healthy, legal, and ethical uses of digital information and technologies.

Standard 5: Professional Learning & Program Evaluation
Candidates demonstrate the knowledge, skills, and dispositions to conduct needs assessments, develop technology-based professional learning programs, and design and implement regular and rigorous program evaluations to assess effectiveness and impact on student learning.

Element 5.1 Needs Assessment
Candidates conduct needs assessments to determine school-wide, faculty, grade-level, and subject area strengths and weaknesses to inform the content and delivery of technology-based professional learning programs.

Element 5.2 Professional Learning
Candidates develop and implement technology-based professional learning that aligns to state and national professional learning standards, integrates technology to support face-to-face and online components, models principles of adult learning, and promotes best practices in teaching, learning, and assessment.

Element 5.3 Program Evaluation
Candidates design and implement program evaluations to determine the overall effectiveness of professional learning on deepening teacher content knowledge, improving teacher pedagogical skills and/or increasing student learning.

Standard 6: Candidate Professional Growth & Development
Candidates demonstrate the knowledge, skills, and dispositions to engage in continuous learning, reflect on professional practice, and engage in appropriate field experiences.

Element 6.1 Continuous Learning
Candidates demonstrate continual growth in knowledge and skills of current and emerging technologies and apply them to improve personal productivity and professional practice.

Element 6.2 Reflection

Candidates 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.

Element 6.3 Field Experiences
Candidates engage in appropriate field experiences to synthesize and apply the content and professional knowledge, skills, and dispositions identified in these standards.

4. RELATED RESEARCH OR LITERATURE

Technology is an integral part of our everyday lives, but it should also be a part of each student's education and learning process. As technology use becomes more and more prevalent, the big question becomes how can we use web tools to help our students become more successful in the learning environment. Even more important, the use of these tools can, and should, provide teachers with an adequate way to *engage* all learners. Using web tools in the classroom is more than learning from computers. There is a clear distinction between learning "from computers" and learning "with computers." In the article "The Learning Return on our Educational Technology Investment: A Review of Findings from Research," the difference between the two is clarified by Reeves as follows:

> When students are learning "from" computers, the computers are essentially tutors. In this capacity, the technology primarily serves the goal of increasing students' basic skills and knowledge. In learning "with," by contrast, students use technology as a tool that can be applied to a variety of goals in the learning process, rather than serving simply as an instructional delivery system. Students use the technology as a resource to help them develop higher order thinking, creativity, research skills, and so on. (as cited by Ringstaff & Kelley, 2002, p. 6).

To be successful in the 21st century, students will need to become adults who are critical, technological thinkers. It is the job of the current educators to prepare the students and learners

for what is to come. The real world is filled with the use of web tools; therefore, these elements need to be brought into the classroom to create meaningful opportunities that students can apply to their school experiences as well as their experiences at home. Strong technology experiences in the classroom can be infused in the curriculum to develop stronger understanding, but it can also be used for long term purpose of preparing our students for their future endeavors. Ultimately, technology use in the classroom will lead to well-prepared individuals in the real world.

To be an effective and authentic educator, it is crucial to develop professionally to best teach the current generations. As Richardson (2010) states, "we cannot honestly discuss twenty-first-century learning skills for our students until we make sense of them for ourselves" (pg. *x*). For teachers to be effective at implementing web tools within the classroom, they need to take the opportunity to immerse themselves in the use of web tools. This staff development opportunity will allow the teachers at Austell Intermediate to…"tap into the potential that these tools give us for learning" (Richardson, 2010, pg. 9).

5. EVALUATION PLAN

Success of this capstone project will be determined by the implementation of web tools in the classroom to engage students in content-based instruction. Formatively, this will be assessed by discussions during the training sessions. During each training session, the teachers will be given an opportunity to discuss how they are using web tools within their classroom based on what they've learned so far. While monitoring these discussions, I will determine what knowledge teachers have gained and what direction to future training sessions may need to take. Informal observations can also be done as needed. An additional assessment will be completed via an

online, anonymous pre- and post- survey that will allow me to collect and analyze data that shows the impact of my capstone project.

References

Richardson, W. (2010). *Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms*. Calfornia: Corwin Press Inc.

Ringstaff, C. & Kelley, L. (2002). *The learning return on our educational technology investment: A review of findings from research*. Retrieved July 20, 2011, from http://www.wested.org/online_pubs/learning_return.pdf