

Tech PD at Denison Middle School

By

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## Cover Letter

Dr. Jennifer Maddock  
U.S. Department of Education  
400 Maryland Ave, SW  
Washington, DC 20202

Dear Dr. Maddock:

In the advent of budget cuts, new, creative, and cost effective methods for providing professional development must be found in order to maintain the quality of education our students deserve.

We are at a time when our students must be prepared to become the members of a global society. With these goals in mind and in response to the Department of Education's request for proposals, we respectfully submit a proposal for a technology professional development program implementing a distance education model. It is our hope to improve our professional development opportunities and create a streamlined, effective, and cost effective experience that will develop teacher technology skills and provide for student achievement.

Sincerely,

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## **Abstract**

Education should be preparing our future citizens to compete in a global economy and participate in a global society. In order to accomplish this goal, our teachers must be adequately trained in the skills of a global citizen. The Technology Committee of Denison Middle School proposes a technology professional development program to assist teachers in improving their personal technology skills. The Tech PD program will provide web-based asynchronous professional development for teachers to foster technology-savvy classrooms at Denison Middle School. This program will be delivered through Blackboard courseware and administered by the Denison Middle School Technology Committee. It is the goal of this program to train teachers to be the model of a global citizen in the classroom and thereby provide our teachers with the necessary skills to teach the global citizens of the future.

## Introduction

Are we preparing our children for participation in a global society? As society removes the paper and pencil and moves its communication and transactions to ones and zeros, is our educational system keeping pace? Are our classrooms reflective of the working environment that students will meet in the future?

“In technology savvy classrooms, a teacher acts as a facilitator who sets project goals for the students and provides them with the necessary resources and guidelines to reach those goals. The student himself makes decisions with regards to the design choices, the information he wants to use and display, the resources that he will use. Such an environment prepares a student to work in business organizations in the future” (Dogra, 2010).

Are teachers facilitating learning with tech savvy behavior using technology resources effectively, and thereby demonstrating the knowledge and behaviors of a global citizen?

Our society is asking its educational systems to produce a knowledgeable and tech-savvy workforce that will be competitive in a global society. The Tech PD program will provide web-based asynchronous professional development for teachers to foster technology-savvy classrooms at Denison Middle School. This program will be delivered through Blackboard courseware and administered by the Denison Middle Technology Committee.

## Statement of Needs

*Denison Middle School teachers need a system that will provide professional development (PD) that will allow them to immigrant into the global society and foster technology savvy behavior in the classroom.* Denison Middle School is a school under corrective action based on student test score performance. With this label, comes a slew of professional development for teachers to foster test score improvement. These trainings do not replace

previously required trainings, but are in addition to regular requirements. In short, teacher professional development requirements have tripled. What has not tripled is the amount of time allotted for the completion of professional development?

With this onslaught of requirements, a number of other ills have added to the complexity of the situation:

- Teachers can become resistant/rebellious learners when they are fed some “canned” program seen as a panacea for the school’s ills.
- Poorly allocated time often has different PD requirements conflicting.
- Some providers of PD are unable to model behaviors that teachers are required to perform, which leads to apathy.
- Teachers have little or no control over how, where, when, and why of their professional development, which has increased stress, tension, and absenteeism (Swiatek, 2011).

## **Goal Analysis**

GOAL: The Technology Committee of Denison Middle School will develop a system that will provide web-based asynchronous professional development for teachers to foster technology-savvy classrooms.

While the teachers at Denison Middle School have all passed a Technology Proficiency Test, this does not mean they are effective or active users of technology in the classroom. This lack of technology usage stems from limited time to become comfortable with all of the resources that are available. Providing asynchronous PD will allow teachers to focus on their own learning at their own pace until they are comfortable implementing and integrating technology in the classroom.

The goal is to provide a system where teachers may learn at their own pace, and therefore improve their skill level. Through Tech PD, short, interactive sessions will be offered on tech tools, software, and web-based tools and resources that are available to teachers. The sessions will provide teachers with the practice necessary to become a user of the technology. Follow-up will be required for each session that will involve usage in the classroom by the teacher and by the student. TechPD will improve teacher attitudes, skills, mental models, instruction and achievement; and assessment of these factors will be made.

## **Community Description**

Denison Middle School is located in the city of Winter Haven in Polk County, Florida. The US Census Bureau 2006 estimates the county population to be 561,606 and describes Polk County as the population center of the state. Polk County provides numerous cottage communities for the metropolitan areas of Tampa and Orlando of which the county is sandwiched in between along the Interstate 4 corridor. The State has plans to install a high speed rail system through Polk County connecting these two metropolitan areas. Despite the impressive growth rate, the unemployment rate of Polk County remains the highest in the state.

Polk County's three primary industries are citrus, cattle, and phosphate mining. Tourism plays an economic influence in the county with Fantasy of Flight hosting its annual Sun'N Fun Fly-In, the Citrus Festival in Winter Haven, the Strawberry Festival in Plant City, and the anticipated opening of Legoland in Winter Haven this year. Polk County is also the spring training headquarters for the Detroit Tigers and the city of Auburndale recently developed a summer training facility attracting many AAA baseball farm teams to the area. The per capita income for the county is \$18,302 with 12.9% of the population and 9.4% of families living below the poverty level.

“Polk County School District is the eighth-largest in Florida among the largest 40 nationally. Polk has 160 school sites and centers including 66 elementary schools, 19 middle schools and 17 high schools. Also included are charter schools, career centers, adult schools and alternative schools. More than 92,000 students are enrolled. The district is the largest employer in Polk County with nearly 12,000 employees. More than half of those are employed as teachers. The mission of Polk County School Board is to ensure rigorous, relevant learning experiences that result in high achievement for our students” (Polk School District, 2007).

The Polk County School District like many other districts in the state is facing a severe budget shortfall. Three years ago the district saved 850 jobs with \$75.2 million in stimulus dollars. These dollars expired this year, and with the decrease in property tax dollars to schools, the district is facing some tough choices which will include layoffs and a loss in programs.

## **Educational System**

Denison Middle School, located in Winter Haven, Florida, serves grades 6-8 through an eight period block schedule format. Denison Middle offers courses to meet student needs which include remedial courses in reading and math, advanced courses for gifted students, and a STEAM academy for incoming 6<sup>th</sup> graders. Students are provided electives in technology, home sciences, physical education, music, and drama.

Teachers are provided training for RTI, technology, and Learning Focus strategies and have the services of a highly qualified Media Specialist, Reading Coach, and Math Coach. Some staff members are trained as Technology Coaches to provide peer support training on a voluntary basis. Staff trainings are provided in a variety of face to face meetings, during planning periods, as pull out sessions with substitutes in the classroom, on teacher workdays, and as professional days at a central county location again removing the teacher from the classroom. Follow up is completed and submitted to principals who submit to the county office for recertification points.

Once points are assigned little or no system is in place to evaluate ongoing use of the skills learned.

## **Learner Analysis**

Denison Middle School employs 67 teachers ranging in age from 25 to 66 years with the median age being 43 years. The average number of years of experience is 15 years. 20 teachers have advanced degrees and all members of the staff have passed the county's Technology Proficiency Test.

Most of the teachers view technology positively when proper training is given for implementation, but all feel that training is lacking. The teachers have felt the pressure to integrate technology given the county's initiative to place technology in the classroom and measure its usage. Most worry that they may lose their jobs if they are not considered effective users of the technology.

## **System Design**

Mission: The Tech PD program at Denison Middle School provides technology focused professional development learning that will facilitate tech-savvy growth.

Vision: Tech PD will increase teacher technology skills and enhance technology usage and integration at Denison Middle School and foster achievement in a global society.

Denison Middle school has a wealth of knowledge within its current staff, which includes eight technology coaches, a highly qualified media specialist, and a network manager.

Denison also has been a recipient of classroom technology packages that has enabled every classroom with technological interactivity. With the hiring of a technology facilitator, these employees may form the necessary committee to complete the project.



In order to facilitate a distance learning professional development system, task management must be a clearly defined priority. Under the direction of a technology facilitator, the technology committee will design a system to carry out the goal. Tasks will be prioritized into five tracts of performance: Organization Management, Course Management, Learner Management, and Leadership

Organization Management will begin with program planning and assessment. Goals and objectives will be based on the analysis of learner needs and ongoing assessment. Infrastructure will be created and a system of management processes will be established. Policies will be defined to guide financial management, scheduling, records, and user behaviors.

Course Management will include planning and design, development, delivery, assessment, and archiving. Learner Management will include managing participation, advising, support, assessment and evaluation, and certification. Course Management and Organization Management will be overseen by the technology facilitator in the long term.

Leadership will be maintained by the Technology Committee as a whole. The committee will be responsible for strategic planning, publicity, reporting, assessment, and grants management.

The facilitator will create a registration system, plan technology support, manage resource delivery, organize delivery of distance learning, collect and collate review and evaluation data, and collect, collate, and report follow up to the principal for district reporting requirements. The technology coaches, who are members of the technology committee, will create resources and course content, and provide the instructional role. The media specialist will provide user interface support, curriculum integration support, and serve as copyright advisor. The network manager will provide technical support.

## Methodologies for Data Collection

In order for the organization to develop and improve an effective TECH PD program, a formative, outcome-focused program evaluation will be conducted to anticipate and ensure the needs of the community are met. “The idea behind the formative evaluation is to ensure that the instructional product is meeting its stated goals as efficiently and effectively as possible and that the program is being implemented as planned” (Rovai, 2003, p.5). A combination of hard and soft data that may indicate changes in learner knowledge, skills, and attitudes will be evaluated from multiple data sources.

The Technology Facilitator will initiate, collect, and collate data from multiple sources for evaluation by the Technology Committee. Data will be collected from four target groups: faculty (the learners), students, administrators, and employer- initiated statistical usage software. Faculty—Two data sources.

1. Technology Integration Matrix Survey (TIM)
  - a. Description: “The TIM is designed to assist schools and districts in evaluating the level of technology integration in classrooms and to provide teachers with models of how technology can be integrated into instruction in meaningful ways” (Florida Center for Instructional Technology, 2009).
  - b. The survey will be distributed by email to faculty. The software who has completed the survey, but results will be reported to committee anonymously. In the introductory email, faculty will be informed that the purpose of the survey is to guide professional development choices.
2. Focus Group

- a. Description: Faculty will be divided into departmental focus groups of nine members each. Each focus group will be given a printed list of open-ended questions that are developed from the TIM survey results by the Technology Committee. These initial questions will probe for further topics and concepts.
- b. The focus groups will meet during regularly scheduled monthly departmental meeting time. The Technology Facilitator will serve as the moderator who will present questions to the focus group, maintain order during the focus group discussion, and make an audio recording of the conversation.

#### Students—One data source

1. Opinion Survey

- a. Description: The survey will ask Likert Scale questions about technology integration in the classroom as experienced by the student.
- b. Students will receive emailed survey link through the student email system. Upon completion of the survey, the students will receive a code number and message indicating to report their code number to the media specialist for fifteen minutes of free play in the campus student game room.

#### Administrators—One Data Source

1. Performance Rating

- a. Description: Systematic observation is completed by administrators who complete a performance checklist.
- b. Administrators will observe teachers at least four times a year and will complete a performance checklist which includes items about technology integration. This data will be coded for statistical analysis.

## Employer- Initiated Statistical Usage Software—One Data Source

### 1. Usage Statistics

- a. Description: Usage statistics for all online technology applications are processed for each school by the county's central server.
- b. The technology facilitator will requisition data from county technology department.

## BUDGET for TECH PD

WBS #	Work breakdown structure (WBS) elements	Knowledge/Skill	Facilities	Equipment	Materials	Special Resource	Resource Cost tot	Notes
1	System Designed	Person -- days					person - days x rate = cost	
1.1	Information Flow Defined	Systems Analysis 10					10 x \$270 = \$2,700	
1.2	Software Requirements	System Analysis 2					2 x \$270 = \$540	
1.3	Hardware Requirements	System Analysis 1					1 x \$270 = \$270	
2	Development of Moodle Courseware							
2.1	System flow charts Prepared	Systems Analysis 5					5 x \$270 = \$1,350	
2.2	Courseware program modified	Programming 10					10 x \$230 = \$2,300	
3	Server and Courseware Purchase							
3.1	Vendor Selected	System Analysis 1				Courseware \$10,000	1 x \$270 = \$270	Sub Total \$10,270
3.2	Purchase Order Processed	Purchasing 1					1 x \$116 = \$116	
3.3	Access Received	Receiving 1					1 x \$116 = \$116	
4	System Staffed							
4.1	Personnel Assignments Determined	Personnel Analysis 2					2 x \$230 = \$460	
4.2	Technology Facilitator Hired	Personnel Analysis 5					5 x \$230 = \$1,150	
4.3	In school Staff Duties Determined	Personnel Analysis 2					2 x \$230 = \$460	
4.4	Training on System conducted	Teaching 3 Technical Writing 3	*Media Center --no cost	*Computer Hardware--existing-no cost	User Manuals: 10 sets \$20 = \$200	3 Trainees (27 Person Days)	3 x \$192 = \$576 3 x \$192 = \$576 27 x \$160 = \$4,320	Sub Total \$5672.00
5	Course Development							
5.1	Develop Online Course Materials	Instructional Design 60					60 x \$160 = \$3,600	
5.2	Repurpose Existing Materials	Instructional Design 15					15 x \$160 = \$2,400	
6	Implementation Phase							
6.1	Introduction	Teaching 2	*Media Center --no cost	*Computer Hardware--existing-no cost			2 x \$192 = \$384	
6.2	User Support	Network Manager 15					15 x \$160 = \$4,400	
								Total Program Cost \$41,988



## Summary

Our society is asking its educational systems to produce a knowledgeable and tech-savvy workforce that will be competitive in a global society. Our community has recognized the need to change the skill set of the local workforce. Our future local citizens must develop the skills of a global citizen. Those skills can begin in the classroom if we, as educators, are providing the example of a tech-savvy citizen. The teacher should provide this example and therefore, must have the necessary training to be a global citizen. Traditional professional development has yet to meet this need. The Tech PD program will provide web-based asynchronous professional development for teachers to learn these skills as well as be a global citizen during the process, and enable them to foster technology-savvy classrooms at Denison Middle School where students become global citizens.

## References

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## Appendix A

### Denison Middle School Student Technology Integration Survey

Your answers to this survey will help determine the types of instructional technology support and training that will be provided to your teachers!

Personal information:

1. Select your grade:    6<sup>th</sup> grade,       7<sup>th</sup> grade,    8<sup>th</sup> grade
2. Is this your first year at Denison Middle School:    yes,    no

About your teachers:

3. Please rate your teachers' use of the following technology applications:  
(Pick one choice per application)

	<b><u>APPLICATION</u></b>	<b>NEVER</b>	<b>1or 2 times a month</b>	<b>Once a week</b>	<b>Too many times to count</b>
a.	Smart Board and Slate				
b.	Google Docs				
c.	Video presentations				
d.	ePals				
e.	Edublog				
f.	Google Sites				

About your classes:

4. In which subject do you use the most technology applications?  
 Language Arts,    Math,    Social Studies,    Reading,    Science



5. Please rate how often teachers allow YOU to use technology applications in the classroom:

	<u>APPLICATION</u>	NEVER	1or 2 times a month	Once a week	Too many times to count
a.	Smart Board and Slate				
b.	Google Docs				
c.	Video presentations				
d.	ePals				
e.	Edublog				
f.	Google Sites				

Last Question:

6. Anything else you would like to share about technology in the classroom:

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Submit your Answers!

Wait for your code! Bring the code to Ms. Tune for 15 minutes of free play in the game room!