LBUSD Leadership Development Plan: Common Core Technology Integration

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As educational computer hardware and software continue to be developed at a rapid pace, school districts are not only faced with the challenge of providing current technology for students to use at school, but providing the training and support for teachers to incorporate technology use into the curriculum. The challenge of providing teachers with the technology-related knowledge and reliable support they need to complete their job efficiently will soon be more difficult.

> "In 2009, the Council of Chief State School Officers (CCSSO) and the National Governors Association Center for Best Practices (NGA) committed to developing a set of standards that would help prepare students for success in career and college. The CCSS Initiative is a voluntary, state-led effort coordinated by the CCSSO and NGA to establish clear and consistent education standards."

On August 2nd, 2010, the California State Board of Education joined a growing nationwide educational paradigm shift by adopting the Common Core State Standards. A Systems Implementation Plan was developed and adopted in 2012, and is on target to have Common Core fully integrated into California's educational system by 2015. The Common Core standards are similar to the previous educational standards used to determine curriculum focus, however the Common Core standards introduce the integration of using technology to achieve particular standards:

> **"**Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. They tailor their searches online to acquire useful information efficiently, and they integrate what they learn using technology with what they learn offline. They are familiar with the strengths and limitations of various technological tools and mediums and can select and use those best suited to their communication goals."

Use of technology is integrated into English Language Arts, History, Science, and Math standards through various means such as presentation of content, gathering information from digital sources, using multimedia components, publishing writing, and collaboration. These standards are introduced into curriculum as early as 6th grade.

These new standards provide a challenge for both students and teachers. Students will need to have the skills necessary to navigate a computer or tablet, use a web browser to navigate the web, and use various forms of software for content creation. Students are already learning these skills from their personal devices, however this does not apply to all. The digital divide is closing, but communities that are unable to afford computers and internet access are still in existence. Students unable to learn the skills and concepts necessary to accommodate the technology standards from home will learn them from school instead through means of the content curriculum.

Teachers are now presented with the challenge of integrating technology into their curriculum. That in itself creates more internal challenges. Whereas millennial students have always been exposed to computer technology, the current generation of teachers have not. Late adopters and laggards are still prevalent in the education field, and the idea of technology integration will not be very appealing to them. Teachers will have students that lack basic computer skills and

concepts, and will have to incorporate teaching them into their lessons. Another challenge includes becoming fluent in content creation software in order to demonstrate how to properly use it, as well as answer questions pertaining to it. Probably the most daunting challenge is that in order for teachers to integrate technology into their lessons, they will have to leave the safe haven of their classroom, and visit the school computer lab.

The school computer lab presents an array of new challenges for teachers. The seating arrangement is different, their view of children's faces will be blocked by monitors, managing student behavior will be more difficult, machines will fail, peripheral devices will break, student login credentials will not work, and students will not know how to use the computer or software. Even for seasoned teachers, this new environment can be stressful to the point of never wanting to return. In order to avoid these situations, faculty will need to learn a new skill set through professional development for taking their class to the school computer lab.

Professional Development Goals

The main focus of the professional development is to prepare teachers for their experience incorporating Common Core standards into their curriculum using the school computer lab. In order to do so, the professional development will focus on three goals.

I. Address the performance gap in teachers' skill set of computer and software UI, hardware, computer lab management, and troubleshooting computer related issues.

Teachers will find themselves in an unfamiliar environment when they take a class to the computer lab. It requires a new behavior management plan and preparation. Like sharpening a student's broken pencil, teachers will need to know how to troubleshoot a whole new array of technology related issues that affect a student's performance. Their computer knowledge will need to include navigating through different user interfaces and software interfaces.

II. Address the growth gap in teachers' skill set for integrating Common Core technology standards into their particular content curriculum.

Teachers will have to develop new curriculum and lesson plans to integrate the Common Core technology standards. This will involve discovering and learning how to use computer based learning objects such as software and web based authoring tools, and how to incorporate them into a lesson.

III. Address the knowledge gap in available online community resources that target the integration of Common Core standards.

Social media rise in popularity and ease of connectivity has spurned the development of online professional learning networks and communities. Teachers can ask questions, participate in online professional discussions, and receive support from their peers. The internet has created a broad support network enabling educators to collaborate and communicate. Shifting curriculum

towards the Common Core standards will create a need for professional support. Teachers need to be aware that support extends beyond the school site network and print material.

Learning Objectives

Learning objectives were developed to help steer and guide the development and design of the resulting professional development activities. All proving behaviors for the learning objectives will be accomplished through the PD activities.

Goal 1. Computer Lab Management

I. Learners will know and understand classroom behavior management strategies for the computer lab.
II. Learners will know and understand basic computer user interface and hardware concepts.
III. Learners will know and understand basic troubleshooting skills for computer hardware and software.

Goal 2. Common Core Technology Integration

I. Learners will apply knowledge of computer lab management and Common Core lesson creation by completing a Role-Playing eLearning activity.

Goal 3. Web-Based Community Support Network Awareness

I. Learners will know of various methods for connecting to web based personal learning networks and communities in order to communicate with peers.

Learning Methods & Activities

The professional development activities will be presented via Computer Based Instruction (CBI). In the form of an eLearning module, the CBI will take advantage of current andragogy concepts and practices to maximize on efficiency, ease of use, and completion.

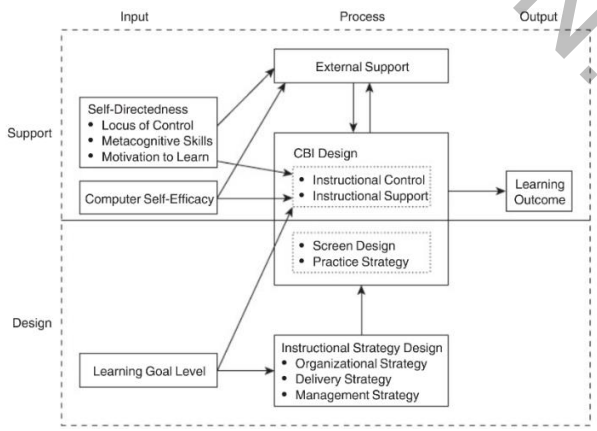

Figure 1. Conceptual model of effective computer based instruction for adults.

Highlights of the CBI

Instructional Design Strategy

The CBI module will be hosted online on the district portal, so users can access it from their work and home computer. School administrators will host a staff meeting in their site's computer lab, where teachers will begin the module. A staff meeting provides several advantages, such as teacher interaction and opportunities for collaboration, computer related help from their peers, and a lowered affective filter, while still allowing for self-directed learning. Content delivery will be through visual and auditory text and video. The CBI will be designed for users to complete, at a minimum, the first two learning objectives within the allotted time of an hour. Users unable to complete the CBI will have opportunities to finish on their own time.

The CBI will be divided into three sections.

Section I	Section II	Section III
Objective 1	**Objective 2**	**Objective 3**
Users are presented with concepts and strategies related to:	Users participate in a role-playing activity.	Users are presented with various online tools for communication and collaboration.
Computer lab behavior management preparation & strategies Basic computer hardware and software concepts Computer related troubleshooting strategies	Users assume the role of a teacher preparing to take their students to the computer lab to complete a Common Core related lesson. The activity is related to the user's instructional subject matter, determined via user input. Previously learned knowledge from Section I is applied.	Online personal learning networks and communities of practice allow the conversation of Common Core and technology integration to expand outside of the worksite. Teachers are able to connect and collaborate with other teachers through various internet related methods.

Self-Directedness

The CBI will introduce teachers to the inevitable dilemma of computer lab management. This will increase the user's readiness to learn as it is related to their work field.

CBI Design

The CBI will use an adaptive combination of program and learner controlled experiences. Using this design will give users with a higher computer skill self-efficacy the ability to control the rate at which they complete the module. Users with a lower computer skill self-efficacy will experience a more learner controlled experience to help reduce anxiety and frustration. The CBI will include a help section to provide support for key terms, concepts, and examples.

External Support

Staff meeting support will be provided through interacting with their surrounding peers, including the school site technology support administrator. The CBI module will provide contact information for users seeking support outside of the staff meeting setting.

The last section of the CBI will target the third learning objective. Users will learn about various means of receiving support via the internet, such as personal learning network websites and interacting through social media tools.

Budget

The budget for the professional development module is within the range of $7,000 - $10,000. The module will provide training and resources for more than 6000 teachers and personnel. The overall budget, including the contract for the interface vendor, will need the final approval of the school board.

Resource	Cost	Comments
Staff Professional Development	$0	PD is scheduled to occur during a staff meeting. Weekly staff meetings are contractually mandatory at no cost.
CBI Instructional Design Team	$2,000 – 2,500	A team will be created from within the district personnel to design the CBI's Instructional Strategy Design. The team should include at the very least leaders in: Educational Technology Curriculum Design Common Core Standards District Technology Support Each member will receive a stipend based upon the amount of team members and funds allocated.
Contracted CBI Module Interface Design Vendor	$5,000 – 7,500* **estimate*	A vendor will be chosen to design the software interface delivery for the module. Vendors will be evaluated on factors such as support, delivery

		timetables, life cycle costs, and bid amount.

Evidence of Learning

The CBI eLearning module will include a function to provide administrators with evidence of module completion by the learners. Users will submit module completion evidence that will display their name and employee ID to their school site administrators.

Evaluation

The CBI module will have a feedback function, where users can provide feedback related to their experience with the eLearning activity. Contact information will also be provided, so users can connect outside of the CBI. Feedback will be organized into categories relating to positive and negative user experiences, so proper action can be made to improve the module for its future use.

Conclusion

As the school district modifies its content instruction strategies to reflect the Common Core standards, computer lab usage is expected to rise. This will be evident by the rate at which teachers are using the school computer lab to provide instruction and support. Many online calendar tools are available for school sites to manage and track the computer lab usage. As computer lab usage increases and application of the behavior management strategies develop into routines, the need for administrative support is expected to decrease. Teachers will be able to identify issues that require support from the school district tech personnel, and are expected to troubleshoot common computer related issues themselves. Awareness of the methods of online interactions with peers and colleagues is expected to increase, although it will not be mandatory for teachers to participate in such activities.

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