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Principals, New Teachers and
Technology

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Hi, I'm Bruce Duncan, Director of Technology for the New Teacher Center @ the University of California Santa Cruz, and I'd like to welcome you to this presentation on Principals, New Teachers, and Technology.

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Two key questions:

- What should principals expect of new teachers when it comes to technology?
- What is the role of the principal in supporting beginning teachers as they learn to use technology in an instructional context and as a professional?

In this presentation we will address two key questions: first, "What can principals expect of new teachers when it comes to technology?" and second, "What is the role of the principal in supporting beginning teachers as they learn to use technology in an instructional context and as a professional? I'll share some information and answers to these questions based on my experience and the work of the New Teacher Center supporting new teachers through effective induction programs across the entire country.

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- "Phases"
- Growing up!
 - Pre-service preparation
 - Induction
 - Teaching career

Developing one's technology proficiency is an ongoing process occurring over various phases.

Growing up in a "high-tech" era, today's young adults likely had numerous opportunities to develop their technology knowledge and skills, both at home and at school. Those that enter a pre-service training program bring with them whatever level of technology proficiency they developed while growing up.

Pre-service preparation programs typically incorporate standards and course requirements for developing technology proficiency. Such requirements provide a context and impetus for the continuing development of technology knowledge and skills.

During the induction phase, this process expands and continues. New teachers enter the classroom and encounter the challenges of using technology as an aspect of teaching and a professional tool. And certainly, over the course of a career, teachers will encounter continuing opportunities to deepen their abilities to use technology to support effective instruction and student learning.

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Pre-Service Preparation

- CCTC sets standards for and approves teacher prep programs
- Teacher candidates completing approved programs
 - Achieve program standards
 - Demonstrate initial proficiency
 - Receive preliminary credential

In California, the Commission on Teacher Credentialing establishes program standards for teacher preparation programs, and approves professional preparation programs that meet its adopted standards of quality and effectiveness.

Teacher candidates who complete their pre-service training through such a program achieve these established program standards, and in doing so demonstrate a level of initial proficiency and readiness to enter the teaching profession. They receive their preliminary teaching credential based on their successful completion of an approved program.

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Pre-Service Standards

Standard 9: Using Computer-Based Technology in the Classroom

- Requires completion of foundational computer technology course work
- Includes general and specialized skills in the use of computers in educational settings

One of these pre-service standards, Standard 9, delineates the level of technology-related proficiency a teacher candidate should be able to demonstrate by the end of pre-service training. So to begin to answer our first question, let's briefly review its contents.

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Standard 9

Each candidate...

- *Is familiar with*
 - Basic principles of operation
- *Uses*
 - Computer applications
- *Implements*
 - Basic troubleshooting techniques

Standard 9 requires candidates to develop familiarity with the basic principles of operation of computer hardware and software, and to use computer applications for various purposes, for example, to manage data and records within school systems. Candidates should be able to communicate via printed media, email, and by using other computer-based collaborative tools, which could include, for example, online discussion forums or collaborative workspaces. A candidate should also be able to conduct basic troubleshooting techniques for computer systems, including peripheral devices, before escalating to other available, appropriate tech support resources.

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Standard 9

Each candidate...

- *Examines*
 - Variety of current educational technologies
- *Analyzes*
 - Best practices and research findings on the use of technology

Standard 9 requires candidates to examine a variety of current educational technologies and develop and maintain, through analysis, an understanding of what “best practices” literature and research findings say regarding the use of technology.

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Standard 9

Each candidate...

- *Demonstrates*
 - Knowledge of legal/ethical topics
 - Ability to assess data
 - Competence using electronic research tools

Achieving Standard 9, a candidate will be able to demonstrate knowledge of legal/ethical topics, including copyright, privacy, security, safety issues, and Acceptable Use Policies. Candidates demonstrate the ability to assess data, including its authenticity, reliability, and bias. They will also demonstrate competence in the use of electronic research tools.

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Standard 9

Each candidate...

- *Examines and Evaluates*
 - Technology resources
 - Materials
- *Selects*
 - Appropriate technology resources
 - Appropriate software

Candidates develop the ability to examine a variety of current educational technologies and, using established selection criteria, evaluate materials, for example, multimedia, Internet resources, telecommunications, computer-assisted instruction, and productivity and presentation tools. Candidates also develop the ability to select appropriate technology resources, based on content to be taught. They are able to select appropriate software for its relevance, effectiveness, alignment with content standards, and value added to student learning.

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Standard 9

Each candidate...

- *Designs lessons*
 - Based on best practices and research findings on the use of technology

And lastly, Standard 9 requires candidates to design lessons based on best practices and research findings on the use of technology. This requirement reinforces the position that the selection of technology resources is not an arbitrary process, or one made solely on which technology resources happen to be available, but rather is thoughtful and informed.

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New Teachers

- Possess certain technology proficiency
- Ready to teach with technology?

While new teachers may have developed certain levels of comfort and proficiency using technology in their personal lives and as students, they are not necessarily fully prepared to *teach with technology*.

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The Principal's Role

What is the role of the principal in supporting beginning teachers as they learn to use technology in an instructional context and as a professional?

That brings us to our second question: During the induction phase, what can you do to support new teachers as they grapple with the challenge of applying technology in their work both in and out of the classroom?

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Expectations During Induction

- California Beginning Teacher Support and Assessment Program (BTSA)
- Standard 16

First, it's critical that you are aware of the technology-related knowledge and skills your new teachers are expected to acquire during their induction period. In California, these are specified in Standard 16 of the Beginning Teacher Support and Assessment Program.

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Focus:

Using Technology as a Tool
for Lesson Planning and Design

Standard 16 has a very specific focus: using technology as a tool for lesson planning and design.

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Standard 16

- Range of technology concepts and applications
- Emphasis on practical application
- Deeper level of proficiency
- Discrete elements

Standard 16 builds on the competencies acquired during your teachers' pre-service experience. It covers a similar range of technology concepts and applications but places increased emphasis on the practical application of previously acquired skills and on developing a deeper level of proficiency. Standard 16 is comprised of seven discrete elements. For ease of understanding, we've grouped these elements under four broad themes.

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Communication

- *communicates* through a variety of electronic media
- *interacts* and *communicates* with other professionals through a variety of methods

First, good lesson design requires good communication. Standard 16 requires communication using a variety of electronic media. Examples might include email, word processing programs, and on-line collaboration tools.

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Tools & Resources

- *uses* technological resources available inside the classroom or in library media centers
- *uses* technology in lessons to increase students' ability to plan, locate, evaluate, select, and use information to solve problems and draw conclusions
- *uses* computer applications to manipulate and analyze data as a tool for assessing student learning and for providing feedback to students and their parents

Tools and Resources represent a second major area. Examples include using technology to gather instructional resources, to improve lesson outcomes, and to analyze data.

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Student Use

- *designs, adapts,* and *uses* lessons which address the students' needs to develop information literacy and problem-solving skills as tools for lifelong learning
- *fosters* learning environments that promote effective use of technology aligned with the curriculum

The third group focuses on student use of technology. Beginning teachers need to design lessons and learning environments that develop information literacy, promote lifelong learning, and foster effective use of technology.

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Reflection

- *demonstrates* competence in evaluating the authenticity, reliability and bias of the data gathered
- ...*determines* outcomes and *evaluates* the success or effectiveness of the process used
- ...*monitors* and reflects upon the results of using technology in instruction and adapts lessons accordingly

Finally, new teachers need to extend reflective practice to their uses of technology. They need to be savvy about data and feedback loops, and ensure that their uses of technology truly are leading to desired results.

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Induction Support

- Be familiar with Standard 16
- Find out what local BTSA is going.
- Support BTSA program activities
 - Scheduling considerations
 - Aligning expectations

Simply by being familiar with Standard 16, you will be in a good position to support your beginning teachers. To improve your position even more, find out what your local beginning teacher support program is already doing for teachers in the area of technology and encourage your teachers to take advantage of such offerings. Align your own expectations with those of the program as much as possible. And remember that new teachers will have meetings and time commitments related to their induction program; schedule faculty meetings and other required staff activities accordingly.

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Induction Support

- Articulate which site-level activities require technology use.
- Understand skills needed to perform site-level tasks and meet site- and district-specific goals.

Be sure to articulate for new teachers the site and district tasks that will require them to use specific technology. Is there an online attendance program? Is the teacher expected to maintain a classroom page on the web? And be sure you, yourself, understand just what skills are needed to perform any of these tasks.

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Induction Support

- Provide ways for teachers to acquire needed knowledge and skills.
 - Site-based professional development
 - District level orientation and training
 - Online and in-person courses
 - Coaching (peer, mentor, etc.)

And of course, provide ways for new teachers to learn the new skills you require of them through a variety of means, including formal training and just-in-time coaching opportunities.

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California's
Statewide Educational
Technology Services
(SETS)



Finally, be sure you take advantage of quality online resources that can help you and your teachers better utilize technology to improve learning. For example, the California Department of Education provides four statewide educational technology services free of charge to California educators.

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CLRN




- Reviews of digital learning resources
- Aligned to CA standards
- Searchable
- ELARs
- Links to freebies
- www.clrn.org

The California Learning Resources Network, or CLRN, streamlines the process of searching for and finding standards-aligned software, video and Internet learning resources. Your teachers can search for approved products by grade level, by standard, or by subject area. As a principal, you will want to take a look at CLRN's reviews of electronic learning assessment resources (ELARs). CLRN also has a library of links to free online resources.

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EdTechProfile




- Self-assessment survey
- Data for decision-making
- Tracks growth over time
- edtechprofile.org

The EdTechProfile provides you as an educational administrator with tools that guide your decisions about how to integrate technology into classroom instruction and how to create and evaluate effective teacher technology training programs. It also provides all teachers, including beginning teachers, a way to assess their existing level of technology proficiency and to track their growth over time.

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TechSETS



- Troubleshooting
- Training
- Resources for all levels of support staff from "first responders" to district specialists
- techsets.org

The TechSETS Web site, while not targeted at beginning teachers, is a very useful service for any members of your staff who have technical support responsibilities as part of their regular or adjunct duties. TechSETS provides simple troubleshooting guides as well as free and low-cost technical support resources and training. It is designed for information technology and educational technology administrators, support staff, and teachers who are responsible for planning, building, maintaining and using technology systems in education.

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TICAL



- [Database](#) of 500+ leadership resources
- Statewide [cadre](#) of tech-savvy site and district administrators
- Online administrator's forum
- www.portical.org

TICAL, the Technology Information Center for Administrative Leadership, helps you make sound decisions about technology both for learning and for school management. TICAL's website includes links to examples and case studies of effective integration of technology in the classroom as well as resources on such topics as data-driven decision-making and technology planning. TICAL also maintains a cadre of administrators across the state who are available for consultation on technology-related issues.

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For further information

1. Go to <http://www.portical.org/find.html>.
 2. Type BTSA in the Keyword field.
 3. Click "Begin Search."
- Register as a TICAL member at <http://www.portical.org/register.html>

I hope the information and ideas included in this presentation will be useful as you work with your beginning teachers to incorporate technology into their daily teaching practice. For additional resources on this topic, visit TICAL and, using the simple search option, search using the keyword "BTSA." Or, to be alerted when new resources are added to TICAL's collection, register for a free membership. On behalf of your beginning teachers, thank you very much for taking the time to view this presentation.