USING TECHNOLOGY TO TEACH

Bay Area Workforce Development Collaborative
Foster City, California
MAY 15, 2012
WELCOME

Ray Towne, Foster City

Steve Dennis, Chair Cal-Nevada  AWWA

Cheryl Davis, Chair BAYWORK
AGENDA

• 8:45 – 9:45 Use of Video to Create Instructional Materials
• 9:45 – 11:00 Distance and On-Line Learning
  • 11:00 – 12:15 Technology
    – Santa Clara Valley Water District (SCVWD)
    – Colorado Springs Utilities (CSU)
    – San Francisco Public Utilities (SFPUC)
    – East Bay Municipal Utility District (EBMUD)

• 12:15 – 12:30 Next Steps
USING VIDEO TO CREATE INSTRUCTIONAL MATERIALS
BAYWORK Video & Field Guide on Video SOPs

Cheryl Davis, SFPUC
Carolyn Jones, SFPUC
Colter Anderson, Zone 7
Armando Guizar, SJ/SC WPCP
Video SOPs

HOW TO PRODUCE VIDEO STANDARD OPERATING PROCEDURES
Tips on Using Video to Document Knowledge of Subject Matter Experts

Joanne Price, Knowledge Capture Services
VIDEO CAPTURE OF SUBJECT MATTER EXPERTS: THREE KEY CONSIDERATIONS

1. EXPERTS’ KNOWLEDGE
   • Knowledge is Organized Around Key Concepts
   • Knowledge is Context-Sensitive
   • Knowledge is Distributed

2. NOVICES’ NEEDS
   • Understand Key Concepts
   • Understand Applicability
   • Cognitive Overload & Review

3. KNOWLEDGE TRANSFER
   • Connection to Prior Knowledge
   • Understanding vs Memorization
   • Over-Conditionalized Knowledge

Seasoned Staff
Manufacturer Training
Consultants Training
VIDEO CAPTURE OF SUBJECT MATTER EXPERTS (SMEs): LESSONS LEARNED

COLLABORATE DURING PLANNING

 ✓ Meet with SME and Other Key Staff to Identify Scope of Capture
 ✓ Consider Best Capture Locations

STRUCTURE BUT DON’T CONSTRAIN

 ✓ Use General Outline for Scope of Shooting
 ✓ Do Not Script the Presentation
 ✓ Have Another SME Present During Shooting
 ✓ Emphasize Ease of “Retake” Procedure

INTEGRATE WITH OTHER RESOURCES

 ✓ How Resources Will Be Accessed?
 ✓ Connections Possible to Other Resources?
QUESTIONS?

CONTACT ME FOR MORE INFORMATION

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Videos Developed by BAYWORK Members

Stephanie Orosco
San Jose Water

James Mcpherson
Union Sanitary District
VIDEO TO CAPTURE KNOWLEDGE AND DISPLAY PROCEDURES

• Use of videos to supplement written procedures
  – Ensure video shows participants in compliance with safety requirements
  – Script movements
  – Verify steps in video match written procedure(s)
  – Establish review process
    • Who reviews and who approves
  – Will ultimately support Mobile Learning (MLearning)
VIDEO TO CAPTURE KNOWLEDGE AND DISPLAY PROCEDURES
Questions?

FOR MORE INFORMATION

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DISTANCE AND ON-LINE LEARNING
Applying Key Design Principles to On-Line Learning

Leveraging what we know to help others learn
Brian Beatty, PhD  ITEC@ SF State University
A Sample of Learning Principles

1. Learning is a **process**.

2. Motivation **enables** learning; without it, nothing can be learned.
Take the time to evaluate your approach

**During Design and Development**

Explore possible alternatives, test your design concepts, and validate your decisions ... BEFORE you begin “for real” training.

**After Delivery**

Look for the impacts you expected. Is there any evidence of success?

**E-learning Examples**
This is just the beginning...

QUESTIONS? CONTACT ME FOR MORE INFORMATION

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EBMUD USE OF WEBINARS

Ed Sullivan
EBMUD
PART OF LARGER ORIENTATION STRATEGY

TIMELY, COST-EFFECTIVE COMMUNICATION

- Important information regarding personal safety & District security
- Webinars set standards, embed information
- Monthly operational rhythm established
- Achieved organizational buy-in by meeting managers’ & participants’ needs

LOGISTICS MATTER AS MUCH AS TECHNOLOGY!

- Establish clear roles & responsibilities for team
  - IT; HR/Training; SME/Content expert
- Plan, prepare, rehearse
- Build in visual interest & opportunities for interaction
LESSONS LEARNED

• Send instructions to participants & their supervisors
• Provide alternative “group” viewing venues for non-PC users
• Make participants validate connectivity
• Have a back-up technical solution (e.g. alternative networked location for slides, hard-copy handouts, etc.)
• Have back-up instructors trained (& back-up workstation ready too!)
• “Engage, engage, engage!” – or they’ll multitask on you
• Update your material continually
• Reinforce the learning – Follow-up is key
• Solicit feedback early & often, self-assess honestly
• Webinars are just one tool – using each one appropriately adds value!
QUESTIONS? CONTACT ME FOR MORE INFORMATION

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USE OF WEBINARS AND VIDEOCONFERENCE AT THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

GENE PATRICIO

MWD
Tapping Technology to Train, Meet, and Communicate

Videoconferencing

How has Metropolitan used videoconferencing?
• Training
• Meetings

Benefits
Potential Issues
Limitations
Webinars - An effective tool

Webinars

How has Metropolitan used Webinars?
  • Training
  • Meetings

Potential Drawbacks

Benefits of Webinars

Creating buy-in and changing a culture
Videoconferencing @ EBMUD:
More Distance Learning Lessons

EBMUD, SFPUC & MWD
Helen Argyres, Manager of Employee Development, EBMUD
SIMULTANEOUS LEARNING AT MULTIPLE SITES FOR DHOS CONTACT HOURS

**Goal is cost savings through resource sharing**

- Videoconferencing new to EBMUD in 2012
- **Limited experience** with multi-agency connections
- EBMUD originated 1-hour presentation on Water Quality Regulations for 3 audiences in April: EBMUD, SFPUC, MWD
- **External bridging service required** to connect agencies
- Coordination with DHOS to ensure sign-in sheets met requirements for Contact Hours
LESSONS LEARNED

Technology is Fundamental.
- Understand capabilities & limitations of your system as you plan your events, including PC links
- Third party bridge adds another interface – more to test!
- Test ALL your systems – TOGETHER - in advance
- Have technical support on-call
- Prepare for hiccups – e.g. Hard copy hand-outs of visuals; phone links for audio

Human Interface & Logistics are critical!
- Up front communication not just for techies!
- Rehearse your presenter – with the system
- Plan for interaction as part of event
- Room set up at all venues should facilitate multi- directional communication
- Brief your audiences at the start – what to expect, what to do
Questions?

QUESTIONS? CONTACT ME FOR MORE INFORMATION

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BREAK TIME!
Using SKYPE as a Learning Tool

Ingrid Bella
SCVWD
What is Skype?

• Voice-over Internet Protocol (VOIP) and software application
• Owned by Microsoft as of March 2011
• Over 35 Million simultaneous online users
How to use Skype for Training

The most effective training combines audio, visual, and kinetic elements

- Skype can be used as an alternative to video conferencing for group training
- Speakers, lecturers, and instructors can be shared among several users
- Camera can be directed towards a white board or other visuals
- Files can be sent through Skype
- Calls can be recorded for MP3
- Equipment required – Webcam; headset, projector
Pros and Cons of Skype

**Strengths**
Convenience
Low Cost for software (free to $10/month)
Reduces travel costs
Better than phone call alone

**Weaknesses**
Quality can be mediocre compared to Videoconferencing
Network restrictions
QUESTIONS?

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Design of Custom Training Videos

Ben Lucero – Sr. Instructional Designer
Colorado Springs Utilities
Stages of Video Production and Some Important Tips

Before You Begin
- Educate yourself
- IT is your friend
- Management buy-in
- Make it a budget line item
- Develop tech standards
- Align with company business goals

Pre-Production
- Know your customer’s business
- Involve decision makers
- Communicate project expectations
- Agree on output
- Script
- Storyboard
- Carefully choose location & time
- Lighting
- Audio
- Attire
- Voiceover?
- Consider going tapeless
- Use a checklist

Production
- Arrive early
- Bring script
- Use a tripod
- Brief all involved personnel
- Coach talent
- Bring backup supplies
- Test lighting
- Test audio
- Log clips/scenes
- Shoot B-roll footage

Post-Production
- Branding?
- Collect assets
- Organize project in editor
- Edit
- Render
- Encode
- Publish
- Review
- Make adjustments
- Republish
Thank You!

QUESTIONS? CONTACT MI FOR MORE INFORMATION

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PODCASTING BASICS

Ty Whitman: Water Treatment Operator / South San Joaquin Irrigation District

WHAT IS A PODCAST

Internet Radio on Demand
Downloadable
Subscribable
Uses of Podcasting

THE WATER SIFU
HOW TO PODCAST

Release Your Podcast

- Feedburner
- WordPress
- Libsyn
  Media Host
- Domain
  (Your Address)
- Web Host
  (Your Space)
- iTunes

Record Your Podcast

- Computer
- Mixer
- Recorder

Prepare Computer File

- Edit (Adobe Audition / Audacity)
- Save As .mp3
- Tag
- Upload
FOR MORE INFORMATION...

Videos:
LearnHowToPodcast.com

Podcasts About Podcasting:
The Podcast Answer Man
The Audacity to Podcast

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Use of Software Tools to Build On-Line Training

Considerations, Methodology and Advantages
Carl Luckenbill, Chief Learning Officer SFPUC
Use of Software Tools to Build On-Line Training

**What to Consider Before you Start**

- Hosting and delivery capability (Is IT on board?)
- Cost of software license and maintenance
- Learning to use the software
- Instructional design and development capability
- Technical knowledge
- Cost of development
- What else?
Use of Software Tools to Build On-Line Training

Analyze
Determine the need to be met with the e-Learning (Tie it to a business objective), and determine viable delivery methods.

Design
Develop objectives, which determines measurement and content, create storyboards and get feedback.

Develop
Create the course using the storyboard as a blueprint. This is where the process deviates from standard ADDIE methodology because of the technical skills involved.

Implement
This step requires the infrastructure usually owned by the IT department. Establish this relationship early as it may affect what you design!

Evaluate
Evaluating e-Learning is both easier and harder to do than instructor-led training. Evaluators need to be trained but testing is more consistent.

ADDIE
Advantages of Using e-Learning

- Software tools available for every skill level
- Cost of development can decrease over time
- If designed correctly, courseware can be reused
- Bandwidth isn’t an issue if you don’t stream media
- Methodology lends itself well to blended learning
- Easily integrated into Learning Management Systems
- File sizes can be smaller
- Materials can be updated easily
Conclusion

If you are willing to build e-Learning development capacity within your organization, over the long run, you can reach more people with fewer resources and less disruption to strained schedules, networks and budgets!
Questions?

CONTACT ME FOR MORE INFORMATION

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HOW BAYWORK IS USING THE WEBSITE TO TEACH

Jim Smith
East Bay Municipal Utility District
CURRENT STATUS

• Information on staff training and knowledge management
• Information on training and jobs
• Postings on public training events (e.g., professional conferences)
• Links to informative websites
WHAT’S NEXT

- Upgraded Navigation Function to help you find resources (e.g., workshop presentations)
- Training Bulletin Board
- On-Line Forums
- Talent-trading
NEXT STEPS