Classroom Technology Overview

Design Challenge by Chris Hughes

Design Challenge Statement

My design challenge is to redesign an existing “train the trainer” classroom technology lecture, and turn it into an interactive experience focused on building instructor competency and confidence in classroom technologies.

- The challenge takes place in the standard dual podium classroom of an adult learning organization.
- Two podiums housing the interface of 5 standard classroom technologies are essential to the learning experience. (Computer/Projector, DocCamera, DVD/CD, Video Conferencing and Microphones/Audio)
- Over the course of 90 minutes, a facilitator and two mentors will guide 30 learners through individual, team, and group activities and evaluations. The activities focus on the steps of accessing each of the technologies.

I selected this challenge as the technology challenge is ongoing. New technologies make their way into the classroom to become neglected or poorly used by instructors.

If instructors are to effectively integrate new technologies into their lessons for the benefit of the learner, a new course design rooted in adult educational theory must be the solution.

Analysis

The existing design is an hour long lecture-based presentation with the option for podium interaction after the lesson. Learner feedback had been gathered from each course via surveys. For this design challenge instructor interviews were conducted to learn about their use of classroom technology. The results highlighted a need to educate instructors on the standard classroom technologies available at the podium, and how to access them. An additional challenge revealed a need for lessening instructors’ fear of technology-access and delivery in the classroom.

Learning Goal Statement

The primary learning goals are for instructors to achieve knowledge, comprehension, application, and delivery of technology solutions incorporating the standard classroom technologies available at the podium. Additionally, I want to build confidence and self-esteem through successful individual, team and group learning experiences.

Prior Knowledge of Learners

- Instructors of an organization who have access to use standard classroom technologies for adult instruction.
- They have at least basic computing skills and are hesitant to use classroom technology for their courses.
- Through feedback they insist any classroom technology training be “on-the-job” and take place in the classroom.

Outline

- **0-15 of 90 Minutes**: Introductions of facilitator and mentors. Establish the classroom as a safe and open environment. Learner introductions and the sharing of their knowledge and experiences with classroom technologies. Start working together to identify and document any issues or concerns to build solutions and form a shared baseline of knowledge.
- **15-30 of 90 Minutes**: Brief introduction and overview of classroom technologies. Technology icon/imagery matching activity (icons/imagery match technology button icons on podium interface) where learners form
teams based on their assigned icon to build the processes for accessing and activating the classroom technology to solve a scenario. Group review of the team solutions and gathering of thoughts, discussion, review and reinforcement.

- **30-45 of 90 Minutes:** Systematically introduce a dilemma for each team to recognize and address by performing their process live for each other at the classroom podium. After each performance a review and reinforcement takes place.

- **45-60 of 90 Minutes:** Simulation/Evaluation/assessment via Automated Response System (ARS). Learners are asked as a group to anonymously answer questions to classroom technology scenarios via their ARS controller. Scenarios are verbalized and visually presented in a simulated podium interface via projected presentation. The submitted answers are viewed real-time via screen projection and we share thoughts, discussion, review and reinforcement.

- **60-75 of 90 Minutes:** Handouts or cheat sheets with all the technology implementation steps (including matching icons/imagery) are distributed. Two teams are then created to compete against each other in a relay to see which team can complete the steps in order, the fastest, in response to common classroom scenarios. Two podiums are used (one for each team).

- **75-90 of 90 Minutes:** A final review of solutions, final thoughts, and reinforcement. Contact and online resource information is distributed. Then surveys are distributed for individual feedback.

**Adult learning theory**

The strategies involved in the lesson are linked with traditional Humanist, Cognitive and Constructivist theories as well as popular adult learning theories.

- Bloom's Taxonomy was used to define the learning goals.
- Maslow's triangle was used in meeting the needs of the learner as well his studies in motivational theory.
- Rogers’ studies are used in relation to stimulus, behavior, attitudes and building meaning from the whole learning experience.
- Knowles research in Andragogy and the bringing of individuals life experiences as a resource for learning and assisting others in learning was applied.
- Elements of Constructivist Mezirow’s phases of transformative learning experience are implemented. As well as the role of instructors as facilitators of active learning.
- Social Constructivist Vygotsky’s theory of knowledge construction in a social context by individuals to build and gain confidence and motivation to learn was also key.
- Other theories included were the Affordance Theory from Gibson for use with ICONs and the Social Learning Theory of Bandura for instructors learning from instructors.

**Professional literature sources**


