**I See What You’re Saying:**

**Applying Visual Communication Skills to Online Instruction**

**Facilitators:**

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**Purpose of the workshop**

This workshop is designed to help participants master basic visual design principles that will improve their visual communication skills and enable them to create and use images effectively in online instruction. The workshop begins with a review of the literature on the importance of visual communication skills in online instruction, and then addresses the learning theories that explain the use of visuals in instruction. Once the theoretical bases have been covered, the audience will be introduced to different kinds of instructional images and how they are used to promote learning and retention. The last segment of the workshop covers visual design principles and offers participants the opportunity to use an image editing application to apply visual design principles to the creation of different kinds of instructional images.

**Learning Objectives**

After this workshop, participants will be able to:

1. Explain why visual communication skills are critical to effective online instruction
2. Explain how learning theory informs the design of visuals for instruction
3. Describe how effective visuals affect learning
4. Name the 5 kinds of instructional images
5. Distinguish between the different kinds of instructional images
6. Use a free image editing application (Sketchbook) to create an instructional image
7. Apply visual design principles to image creation
8. Save images in a variety of file types for upload to online instruction

**Audience:**

This workshop is designed for educators who would like to develop effective images for their online instructional materials. It would be helpful if participants have some prior experience with an image editor. The workshop will help learners:

* Master the theory underlying the use of visuals in instruction
* Discriminate between different kinds of images and their potential instructional use
* Integrate visual design principles into their instructional materials for more effective communication
* Use an image editing application to create instructional images

**Equipment required for participation:**

* A Laptop with a graphics tablet (Wacom), iPad Pro with Apple Pencil, or Surface Pro
* An Internet connection
* Access to Autodesk’s Sketchbook

**Proposed Workshop Length: 3.5 hours**

**200-word Abstract**

Using interactive facilitation techniques and free image editing software, this workshop will enable participants to develop basic visual communication skills and use these skills to create effective images for online instruction. We will introduce participants to information processing theory, Richard Mayer’s multimedia theory (2009), dual-coding theory, and cognitive load theory, and show how these theories relate to visual learning. We will explain how four types of instructional images (representational, organizational, interpretative, and transformational) may be used to engage the learner, combat cognitive overload, and maximize learning, and show why the fifth kind of image (decorative) is a poor choice for instruction. We will introduce participants to basic design principles to help them master the use of contrast, repetition, alignment, proximity, layout, and color in their instructional materials. Finally, we will use a free image editing application (Autodesk Sketchbook) to: 1) demonstrate basic design principles, and 2) provide participants with structured activities that will enable them to develop visual literacy competencies. After participating in this workshop, participants will have a greater understanding of how learning theories inform the design of visual images, the 5 kinds of instructional images, and how to use an image editing application to develop images for online instruction.

**Keywords:** Visual Communication, Online Instruction, Instructional Images, Instructional Design

**Biographical Information**

Dr. Diane Wilcox is a Professor and Academic Unit Head ofthe Learning, Technology and Leadership Education Department in College of Education at James Madison University (JMU), where she teaches graduate courses in visual literacy, instructional design, and instructional technology. Most of the courses she teaches are skills-based, requiring students to apply theory to practice as they design and develop products for clients. Immediately prior to joining JMU in 2004, she worked at Autodesk, Inc. as an instructional design manager where she designed e-learning programs and training programs for enterprise systems.

Dr. Wilcox earned her M.A. and Ph.D. degrees in educational psychology at the University of North Carolina at Chapel Hill. Her Master’s and Doctoral research examined the effect of 3-dimensional animated graphics on children’s learning of fraction concepts and rules. She earned her undergraduate degree in business administration and fine arts at the College of William and Mary, and later studied fine arts at Townson State University and Humboldt State University.

Tom Wilcox is an experienced computer interface designer and programmer (more than 30 years) and is an expert user of a variety of image editing and 3-D design software applications. As an adjunct instructor at JMU (for 8 years), he taught Photography in Education, Production of Instructional Materials, and Web Design for Learning. More recently, he served as the Inventor in Residence for 4-VA at JMU and developed a virtual reality chemistry program for JMU’s Chemistry department to help students visualize crystal lattices. Tom’s formal education is in fine arts. (See wilcoxmedia.com for information on Tom’s background.)

**Topical outline:**

**Part One: Justification of the need for visual communication skills for online instruction**

This part of the workshop will provide definitions of visual literacy and visual communication and will provide justification for the need for visual communication skills in online instruction.

* Definitions of visual literacy and visual communication, justification for the need for visual communication skills
* Examples of both well-designed and poorly-designed images. Participants will be asked to decide whether a particular image is well-designed or poorly-designed and will respond by using a polling app on their phones.
* Review of the most recent research on visual communication skills in online instruction.

**Part Two:** **Learning theories that explain the use of images in instruction**

* Information Processing Theory – shows how information moves from sensory to working to long-term memory.
* Dual coding Theory (Pavio,1986) – shows how the use of images and words help improve comprehension and retention of information.
* Multimedia Theory (Mayer, 2009) – covers the redundancy principle, the contiguity principle, and modality principle and show how these principles are related to learning with images.
* Cognitive Load Theory (Sweller, 2005) – shows how the amount of cognitive load required in a learning environment can be manipulated through effective images.

**Part Three: Kinds of instructional images**

In this part of the workshop, the facilitators will provide examples of the different kinds of instructional images, will discuss their effect on learning, and will provide participants with the opportunity to classify different images according to instructional purpose

* Decorative Images
* Representative Images
* Organizational Images
* Interpretive Images
* Transformational Images

**Part Four: Design principles: Contrast, Repetition, Alignment, Proximity, Color, Type, Space**

This part of the workshop focuses on introducing participants to visual design principles and shows them how to use the principles to create an image for instructional purposes. It also provides the research justification for the use of these design principles and examples of materials that have employed the design principles.

* How to use contrast, repetition, alignment, proximity, color, type, white space, shape, and depth in instructional images

**Part Five: Creating instructional images with an image editor**

Participants will be afforded the opportunity to put theory into practice by using a free image editing application to create instructional images (using Sketchbook). Participants will apply an understanding of theory and design principles to the creation of instructional images for instructional purposes.

* A general overview of the image editing application will be provided
* Hands-on instruction on how to build representative, organizational, interpretive, and transformative images
* How to use the different image editing tools in the app
* How to import images into instructional materials

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