EDT5017 – EDUCATIONAL VIDEO

Week 4 – 28.03.2023

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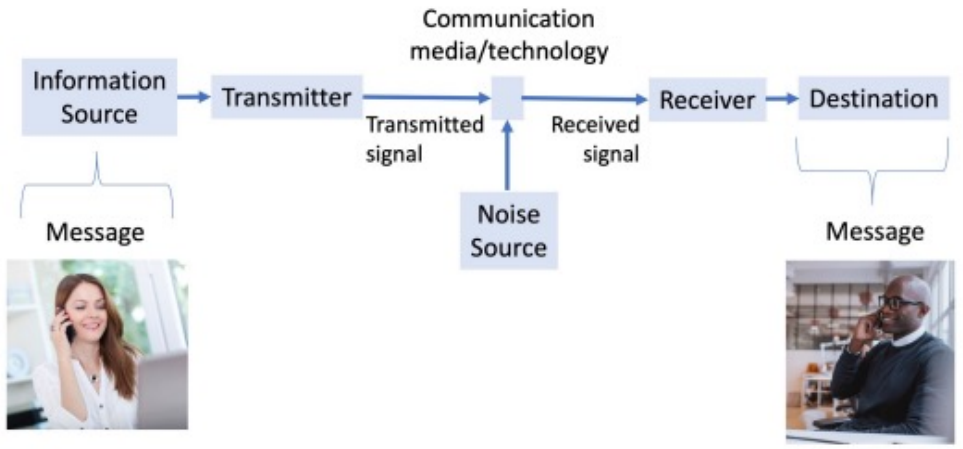
AGENDA

1. About the course and instructor
2. Communication, Interaction, Multimedia Theories
3. Online Video Editing – Canva
4. Project 1

Communication & Interaction

- Interaction > communication
- Interaction: acting to others to affect them

Communication: act of sharing information



INSTRUCTIONAL MESSAGE DESIGN

- Message design is all around us, from the presentations we see in meetings and classes, to the instructions that come with our latest tech gadgets, to multi-million-dollar training simulations.
- Instructional message design is the real-world application of learning theories to effectively design the tools used to communicate, convey information, and transfer knowledge.

Instructional Message Design Theory

- There are several key theories that guide our instructional message design.

- Gestalt Theory
- Gestalt (German for ‘shape’ or ‘form’) theory states that individual components of a picture do not communicate much by themselves, it is only when these individual components are combined
- A complete image is only able to communicate an idea when the components of that image are integrated and presented together.

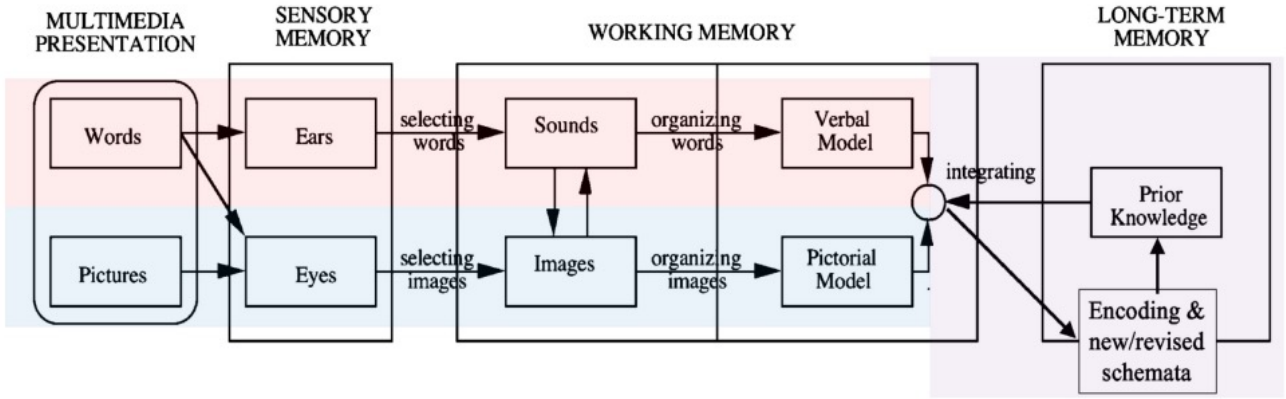
Instructional Message Design Theory

- Cognitive Load Theory
- Our learners have finite short-term or working memory resources for cognitive processing. Cognitive processing, or cognition, is the act of a learner taking available information and adjusting their understanding or behavior based on that information

- Cognitive load theory assumes that learners have limited working memory resources, that the contents of working memory fade after a short time, and humans (have a capacity for nearly infinite long-term memory because of schemata, or the storing of information as patterns).

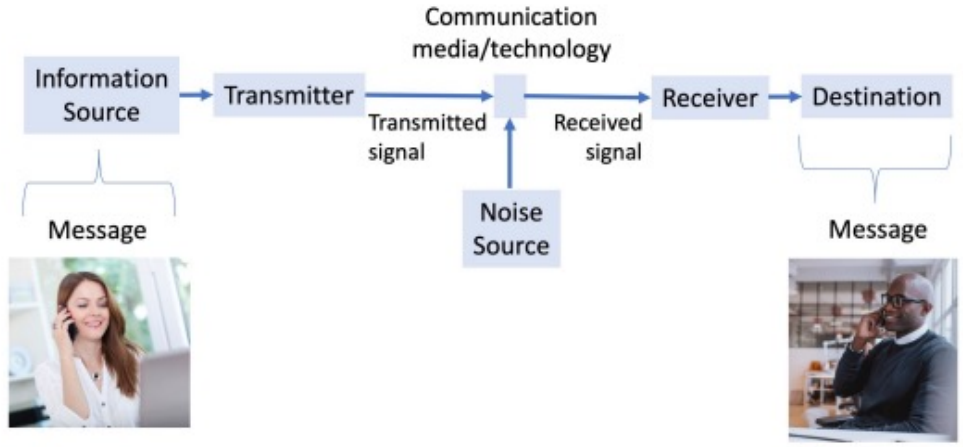
Instructional Message Design Theory

- Multimedia Learning Theory
- Multimedia learning theory evolved from experiments with random treatment groups and digital multimedia with static illustrations with and without text (Mayer & Gallini, 1990).
- These early results indicate the unique advantages of using multiple media technologies at the same time in the same presentation. Mayer's cognitive theory of multimedia desig evolved from this use of text and illustrations and was first based on the dual-coding findings of Paivio (1991), and ther integrated the working memory and cognitive load findings of Baddeley (1992) and Sweller (1991).
- Dual-coding theory states that humans will process video, slides, or animation separately from audio and narration. Learners cognitively combine that information in working memory, then store that information in long-term memory for future retrieval.
- Humans also have finite shortterm and working memory resources, and these limited germane cognitive resources should be guided to focus on intrinsic content rather than extraneous design distractions.



The Message and the Media

- While the affordances of different technology or media allow for different aspects of communication, the instructional message is more important than the media, technology, or vehicle used to deliver that message.

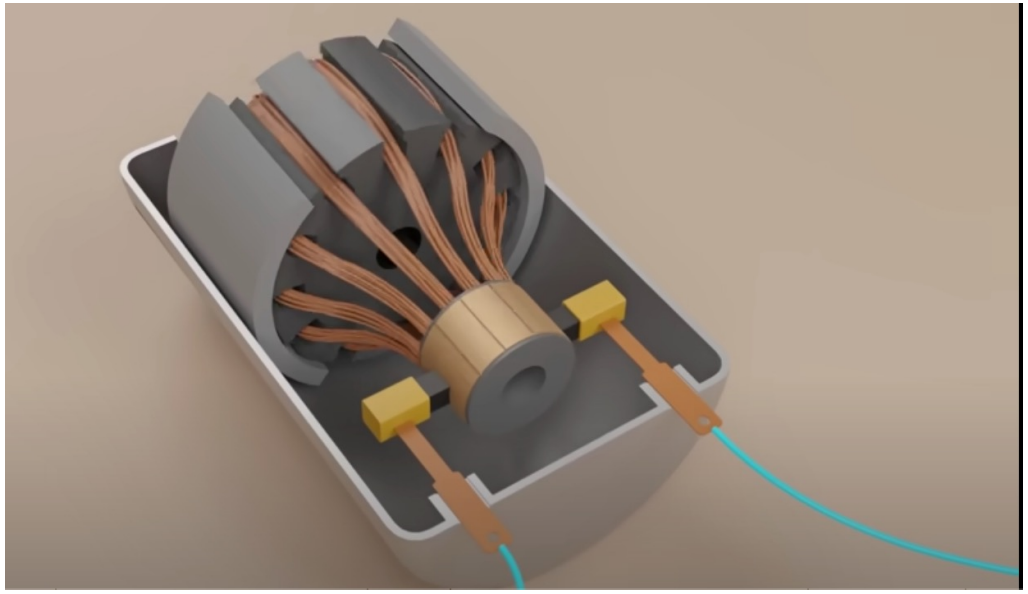


The Message and the Media

- In this example, an animation may be more effective

- Can we say animation is better than powerpoint?

- Electric motor



https://www.youtube.com/watch?v=CWulQ1ZSE3c

The Message and the Media

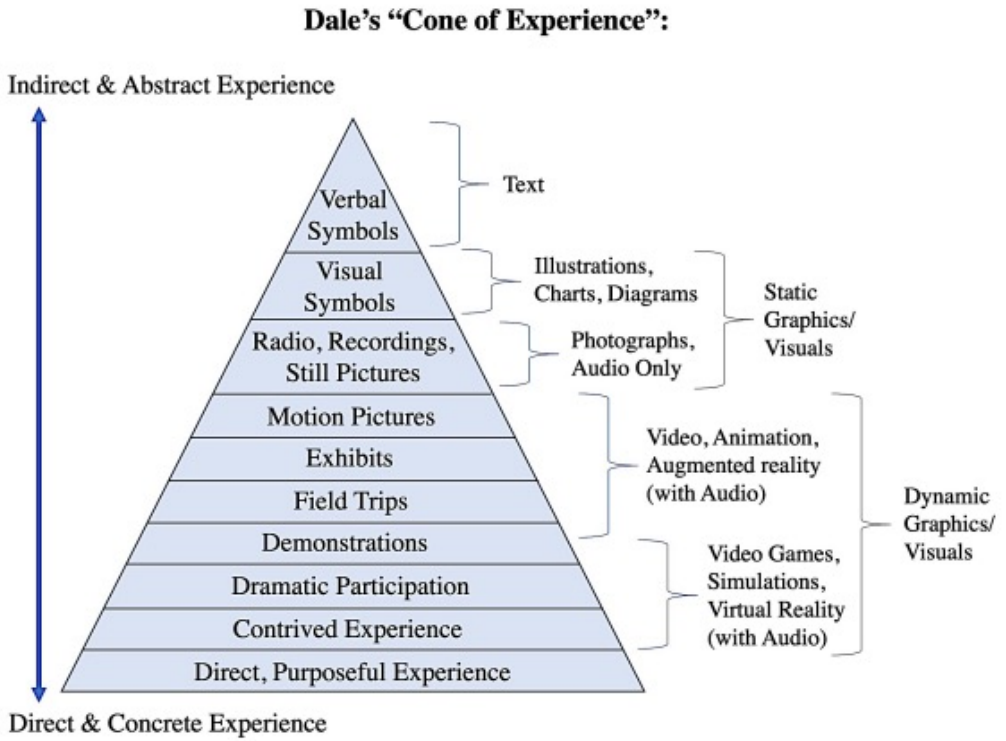
- Rather than comparing technologies and tools to each other (as in a media comparison study), it is more important to study the efficient and effective use of each tool in a message design context
- The analysis of what technology to use to deliver our message should include the heuristics of multimedia learning theory, implications of cognitive load (especially extraneous load), the equivalency to other options, and cost effectiveness

The Message and the Media

- In terms of instructional systems, cost effectiveness, student satisfaction, instructor satisfaction, learning effectiveness, and accessibility are among the variables to consider in high quality programs
- In instructional message design, it is important for us to be sure the vehicle we are using to deliver our message meets the needs of our learners, including accessibility, quality, cost effectiveness, as well as learning effectiveness

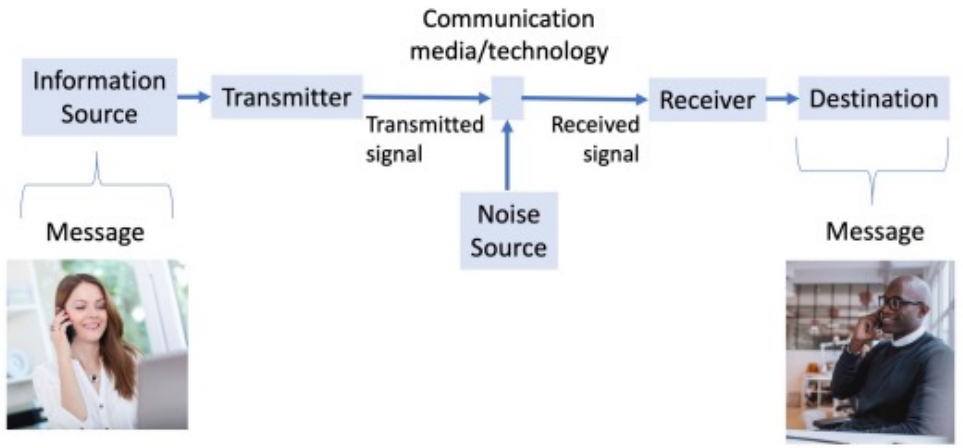
The Cone of Experience

- The cone of experience describes the attributes of media and technology in terms of the conceptual involvement of the learner.
- While this model was developed in the context of the technology available in the early 20th century, its concept of engagement is still as relevant today as it was then.



The General Communication Systems model

- A communication system consists of three components: the accuracy of the symbols being received, the accuracy of the symbols delivering the message, and the understanding of the message

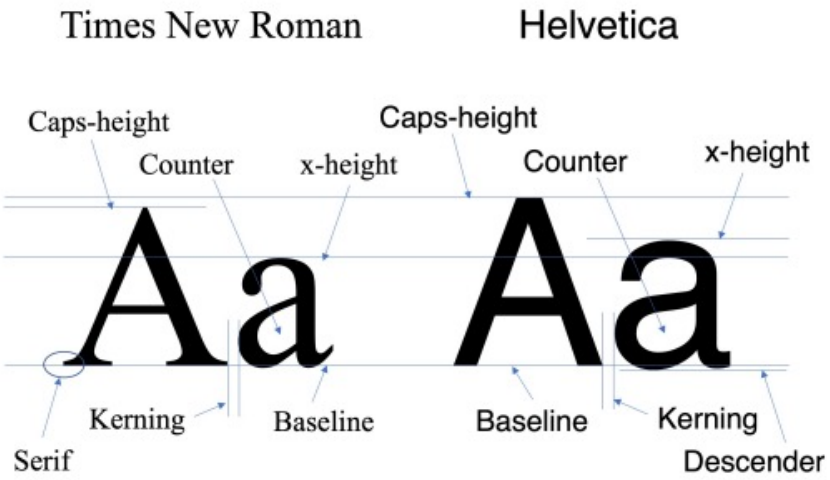


Instructional Message Design

- In terms of instructional message design, the general communication model describes how the message is sent and received. In conceptual terms, the “signal” could be a live, interactive web conferencing protocol that is transmitting our audio, video, and PowerPoint slides, or it could be a textbook or research poster we have designed. In either case, the noise encountered by our image could be extraneous cognitive load erroneously introduced by an instructor or instructional designer, or a bad Internet connection, or both.
- The intended message sent may not be the message received or understood at the destination. A goal in instructional message design is to create, design, and utilize a system that would be robust to both technical and cognitive communication issues.

Instructional Message Design Tools and Techniques

- Text and Typology: There are several other characteristics of a font that contribute to its legibility and readability



- Color: The use of color in message design will have direct and indirect psychological and cognitive implications.
- Color can be used to gain attention, project professionalism and quality, and induce unconscious decision making

Instructional Message Design Tools and Techniques

- Graphics:
- Instructional graphics should communicate and reveal data
- Visual elements beyond text can be categorized into two main types: static art or dynamic art
- Illustrations. Graphics, or visual elements designed or constructed to present data, ideas, or concepts, can take the form of diagrams, charts, and pictures
- Photographs. Photographic art is still life, realistic images taken with a film or digital camera

Instructional Message Design Tools and Techniques

- Graphics:
- Instructional graphics should communicate and reveal data
- Visual elements beyond text can be categorized into two main types: static art or dynamic art
- Modeled Graphics and Augmented Reality. Modeled graphics are static visuals that are three-dimensional and have been created digitally
- Animation. An animation is a series of simulated images that changes over time, such as a rate of 30 images per second, to simulate motion

Instructional Message Design Tools and Techniques

- Graphics:
- Instructional graphics should communicate and reveal data
- Visual elements beyond text can be categorized into two main types: static art or dynamic art

- Video. Similar to the use of static photography for authenticity and realism, video can also be used to record authentic environments especially when audio is also recorded. Video can be used to enhance social presence, for virtual field trips, and to record and collect data (recorded audio and video) from locations that would logistically challenging or inaccessible.

KEY POINTS

- Instructional message design is the application of theory and techniques to communicate information to learners.
- Cognitive load and multimedia design theory can be used to help design our instructional message.
- Visual communications can include static art (illustrations, diagrams, photographs) or dynamic art (animation, video, virtual reality, video games and simulations) with or without accompanying audio.

Before Next Week

- Please discover canva.com
- Signup with your email (if possible k12 email)
- If you signed up with another email, apply for education account
- Try video templates and tools in canva
- If you don’t have please have a gmail account for youtube channel usage

Next Week

- We will use canva for personal video creation
- We will record our voice and picture
- We share it with youtube channel
- And learn to submit it with itslearning platform as “project 1”