Learning Science
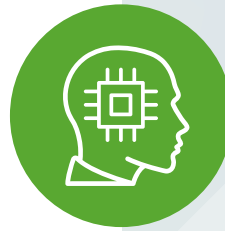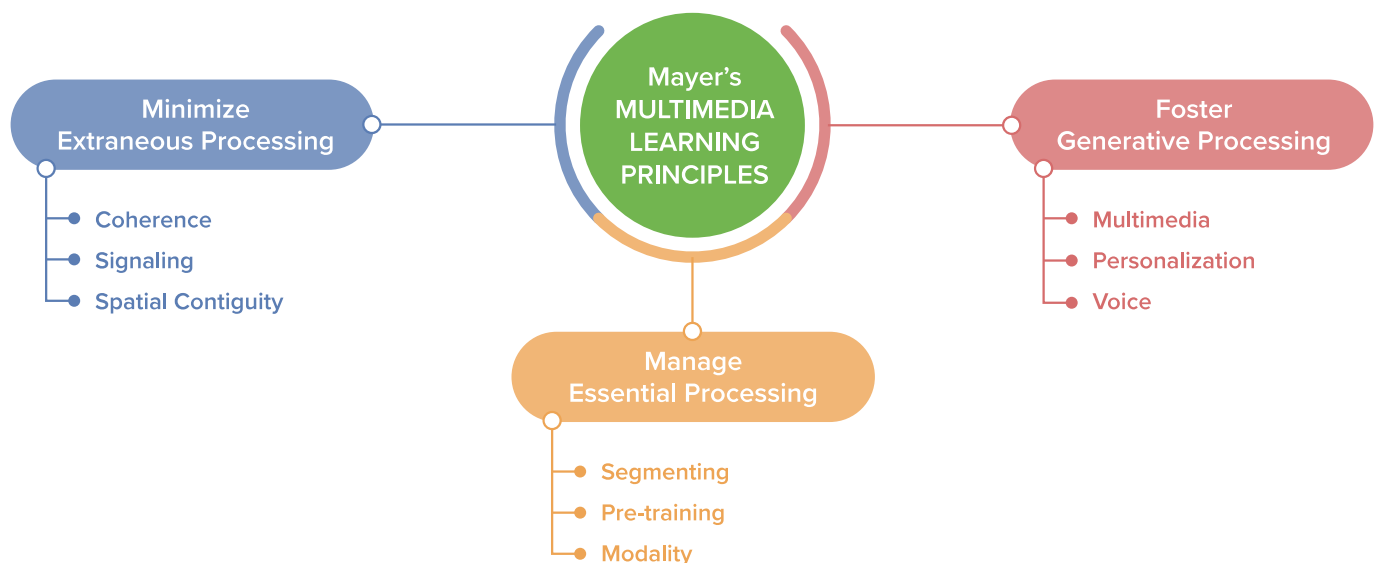
Effective Presentations Worksheet for Health Professions Educators

Lecturio

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This template has been designed to help medical educators and educational specialists evaluate their current resources and slides according to Mayer's multimedia principles and universal design principles. Mayer's multimedia principles are a set of evidence-based guidelines for producing multimedia based on facilitating essential processing, reducing extraneous processing, and promoting generative processing[1]. The template is based on an evidence-based approach that takes into account core concepts from cognitive science.

Minimize Extraneous Processing
- Coherence
- Signaling
- Spatial Contiguity

Mayer's MULTIMEDIA LEARNING PRINCIPLES

Foster Generative Processing
- Multimedia
- Personalization
- Voice

Manage Essential Processing
- Segmenting
- Pre-training
- Modality

Mayer's Multimedia Principles. Nine of Mayer's multimedia principles that have been shown to improve cognitive processing in medical students.

EFFECTIVE PRESENTATION PRINCIPLES & CONSIDERATIONS	SLIDES TO REVIEW

Minimize Extraneous Processing

Do: keep labels next to diagrams, use only essential material, highlight essential material such as titles.

Don't: separate labels from diagrams, include extra facts, or have excessive text on a slide, especially with no indication of what is most important.

- What extraneous material could I remove from each slide?

- How could I highlight essential material?

- Are printed words placed near corresponding graphics?

Manage Essential Processing

Do: Present terms and key concepts first, break lessons into user-controlled segments, and present words in spoken form.

Don't: Give long blocks of text for students to read without priming students for key concepts.

- Where could I add pre-training in names and characteristics of key concepts?

- How could I break the lesson up into learner-controlled segments?

- Am I reading from the slides like a teleprompter? Where can I move text into the Notes field or into the voice-over so that words are presented in spoken form?

Fostering Generative Processing

Do: Present words and pictures, present words in conversational style, and use a human voice.

Don't: Present text only, present words as a list of facts or overly technical language, or use a computer-generated voice.

- Where can I add icons or images so that my slides present words and pictures rather than words alone?

- Do my slides present words in a conversational style, such as a case study, instead of just test results or plain data?

- Do my slides incorporate audio using a human voice rather than a machine voice?

Graphic Design Principles

Do: Use coordinating fonts and color schemes with contrasting colors.
Don't: use multiple fonts, excessive colors, and/or non-contrasting colors that may be difficult to distinguish.

- Are the graphics on my slides designed so that they are visible from the back of the room?

- Where can I edit my slides to use only two or three fonts that coordinate well?

- Where can I improve contrasting colors in my slides as per color family suggestions?

References
1. Mayer RE. Multimedia Learning. 3rd ed. Cambridge University Press; 2021. 450 p.
2. Elias T. Universal instructional design principles for mobile learning. Int Rev Res Open Distrib Learn [Internet]. 2011 Feb 28 [cited 2022 Jun 15];12(2):143. Available from: http://www.irrodl.org/index.php/irrodl/article/view/965