Shifting Online: 12 Tips for Online Teaching Derived from Contemporary Educational Psychology Research

Instructor Visible Effect: When teaching online instructor presence is crucial to establishing community through social connections. Additionally, when presenting information through video or multimedia, a visible instructor who gestures, or provides other useful cues to guide attention can support learning.

Signalling Principle: When presenting novel information, add visual cues to guide learner attention to key areas either by using colour, symbols or text on diagrams.

Split Attention Effect: When presenting visual information such as diagrams or graphs with explanatory text, place text within the diagram, at spatially nearby locations, instead of off to the side or below, like a map legend.

Transient Information Effect: When using multimedia materials, ensure that new concepts are not covered too quickly, and instead slow down the presentation, ‘chunk’ information into smaller, more digestible resources, or allow students agency to control playback of these materials.

Redundancy Effect: When presenting novel information to learners, ensure that auditory and written explanations do not replicate already-presented visual information exactly, but instead highlight key points and serve to enhance learner understanding. If redundant information is present, consider removing it.

Modality Effect: When using multimedia, ensure that auditory (verbal) explanations support visual materials (text or images) without being redundant.

Tracing Effect: When studying visual learning materials such as diagrams or charts, teachers can encourage students to trace or use other hand gestures if they find it beneficial for their own learning.

Example-based Learning: In STEM domains that involve problem-solving based on established rules and sequences, provide worked out examples for students to study in conjunction with practice tasks / questions.

Spacing Effect: When learning online, allow time for learners to 'reset', allowing space for them to rest and replenish their cognitive resources before continuing, either in a synchronous learning environment or asynchronous lessons.

Generative Learning: In contrast to passive absorption of novel concepts and traditional studying techniques, learners benefit from generation and creation of their own understanding. Teachers can encourage active engagement with new ideas through summarising, practice testing, and the creation of video tutorials to teach others.

Human Movement Effect: Like the first-person perspective effect, when presenting procedural motor tasks for students to learn, use animations, and present them from a first-person perspective.

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