Step Up to the Plate! Using Multimedia Content and Game Winning Strategies for Implementation

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Step Up to the Plate!

Using Multimedia Content & Game Winning Strategies for Implementation

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The presenters have no financial disclosures that would be a potential conflict of interest with this presentation.
There are a lot of people who influenced me, nurtured me, helped me along the way. But I can just recall looking back, the first time I got my baseball glove. Put it on the wrong hand, all those kind of things.

~Dave Winfield


Objectives

1. Apply Mayer’s Multimedia Principles (with consideration of the Cognitive Load Theory) to presentation content.

2. Review decision making strategies for using educational technology.

Why?

- Teaching
- Research presentations
- Grant proposal presentations
- Expectations and requirements
  - Professionalism and evaluation

How Does Multimedia Learning Work?

- 2 Channels
- Limited Capacity
- Active Processing
- Verbal
- Visual
- Small Bits
- Engage

4 Mayer’s Multimedia Principles To Consider

- Coherence Principle
- Segmenting Principle
- Redundancy Principle
- Spatial Contiguity

Before and After
What happened in the off-season?

Coherence Principle

Omit extraneous words, visuals or elements add purely for interest. Less is more.

Redundancy Principle

Explain graphic with words OR text, not both
Segmenting Principle

*Break complex lessons into bite-size segments*

Screencast video of downloading PowerPoint Slides from manuscript

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Search for term in images category

1. Search for term in images category
2. Search Tools (expand)
3. Select

Signaling Principle
highlight important elements with cues

Strike Out

Home Run


How to take a radial pulse:

Take Radial Pulse

Calculate

- Beats Per Min (bpm)
- 30 beats in 20 seconds
- \( 30 \times 3 = 90 \text{ bpm} \)

Normal
- Resting Heart Rate
- 60-100 bpm

Redundancy Principle
*Explain graphic with words OR text, not both.*

**Strike Out**

How to determine exercise intensity from the pulse
The Karvonen Formula is a mathematical formula that helps you determine your target heart rate (HR) training zone. The formula uses maximum and resting heart rate with the desired training intensity to get a target heart rate.

<table>
<thead>
<tr>
<th>Target Heart Rate</th>
<th>Minimum HR</th>
<th>Resting HR</th>
<th>Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>180 bpm</td>
<td>60 bpm</td>
<td>55 bpm</td>
<td>50%</td>
</tr>
</tbody>
</table>

**Home Run**

Karvonen Formula
Target Heart Rate Training Zone

\[(HR_{max} - HR_{rest}) \times \text{Intensity} + HR_{rest}\]

**Example 1**
- \(HR_{max} = 180\) beats/min
- \(HR_{rest} = 60\) beats/min
- Intensity = 50%

\[(180 - 60) \times 0.5 + 60\] = 120 bpm

**Example 2**
- \(HR_{max} = 180\) beats/min
- \(HR_{rest} = 60\) beats/min
- Intensity = 70%

\[(180 - 60) \times 0.7 + 60\] = 144 bpm

Signaling Principle
*highlight important elements with cues*

**Strike Out**

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How to screen capture (record) what happens on an iPad or iPhone

1. Connect iPad to Mac with USB cord
2. OPEN Notes (app) on iPad
3. On Computer OPEN QuickTime Player
Select New Movie Recording

In baseball you hit your home run over the right-field fence, the left-field fence, the center-field fence. Nobody cares. In golf everything has got to be right over second base.

~Ken Harrelson

Demonstrated examples of content design (including decision making strategies) utilizing the Cognitive Load Theory to maximize deeper learning by applying Mayer’s Multimedia Principles.

Educational Resources
University Resources
(we know there are many more – here is a start!)

Best Practices
Cardinal Rule: Keep It Simple

http://www.amstat.org/meetings/jsm/2014/effectivepresentations.cfm