

Promoting Critical Reading Through Online Lecture Videos

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1

Presentation Outline

1. Brief story
2. Grounding theories
3. Best practices in making lecture videos
4. Two research studies
5. A few research ideas
6. Questions & Comments



2

Instructional Designer GA



Some people have a tendency to put every single word they are going to say on their slides to prevent the need to memorize their speech; while this may seem like a good way to get your point across it will only lead to crowded slides that will bore your audience to the point where they are no longer listening to you but in fact they are most likely just reading ahead and waiting for you to hurry up and read faster so they can be dismissed and get on with their daily lives that don't involve the likes of you or your presentation.



3



- Course Design
- Course Delivery
- Course Content
- Institutional Infrastructure
- LMS
- Faculty Readiness
- Student Readiness



4

Online Course Design Principles

- Backward Design
- Bloom's Taxonomy
- Community of Inquiry Model
- Universal Design for Learning



5

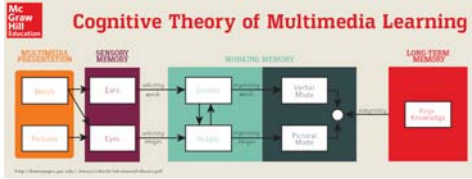
Online Lecture Videos

1. Target audience
2. Objective
3. How to record it?
4. Length?
5. Quality?
6. Frequency?
7. Slides or hand-drawn?
8. Rehearsed or unrehearsed?
9. Show face?
10. Classroom capture or dedicated recording?



6

Cognitive Theory of Multimedia Learning (Mayer, 2009)



1. Dual-channels principle (Paivio, 1986).
2. Limited-capacity principle (Baddeley, 1999; Sweller, Ayres & Kalyuga, 2011).
3. Active processing principle (Mayer, 2009).

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7

Best Practices

- Reference the handout provided

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8

Best Practice 1: Keep the content focused



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9

Best Practice 2: Use Signals



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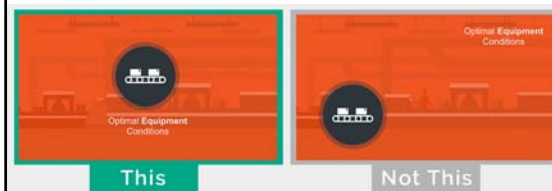
Best Practice 3: More graphics and less text (when there is narration)



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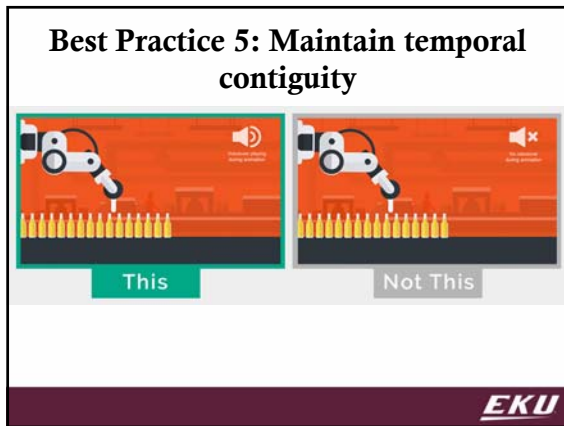
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Best Practice 4: Maintain spatial contiguity



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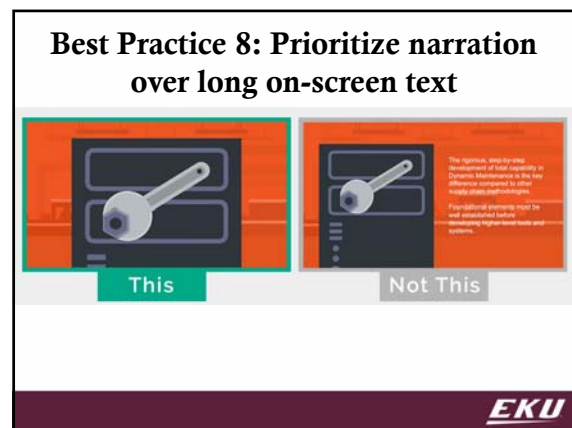
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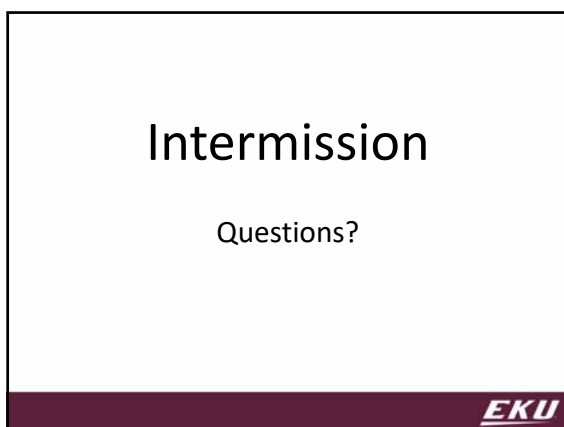
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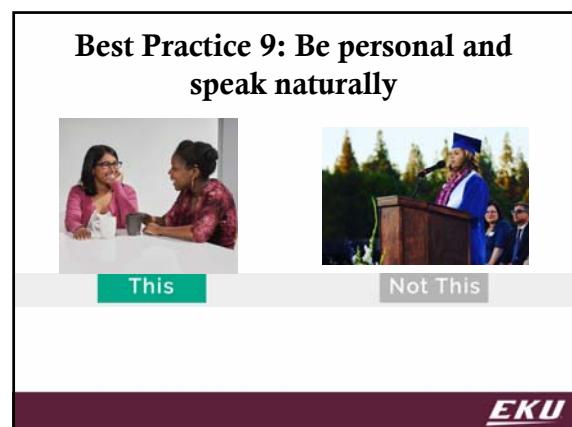
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18

Best Practice 10: Create your videos with online students in mind



This



Not This

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19

Best Practice 11: Gesture and Point



This



Not This

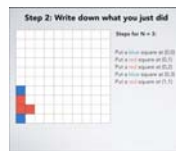
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20

Best Practice 12: Show your face



This



Not This

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21

Best Practice 13: Simple and personal



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Not This

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22

Best Practice 14: Speak with enthusiasm



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Not This

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23

Do you need to implement all best practices?

- The issue of ROI (return of investment)

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24

Best Practice 15: Draw on the screen




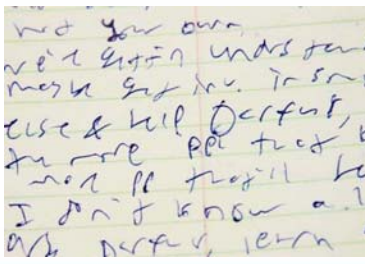
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25

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26

Study 1: Drawing vs. Slides (Chen & Thomas, 2020)





1. Hand-drawn continuous video (Khan academy style)
2. Slides with a few transitions (Power Point lecture)
3. Single still slide

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27

Study 1: Drawing vs. Slides (Chen & Thomas, 2020)





1. Hand-drawn continuous video (Khan academy style)
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28

Study 1: Drawing vs. Slides (Chen & Thomas, 2020)

1. Hand-drawn continuous video (Khan academy style)
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29

Study 1: Engagement Ratings

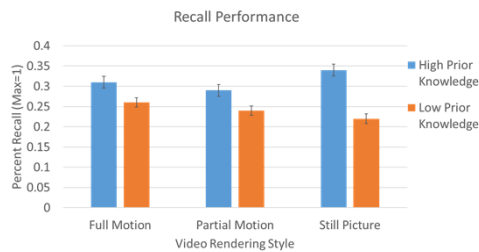
	Full Motion	Partial Motion	Still Picture	Effect Size (Partial η^2)
Engagement Rating**	4.95	4.52	4.44	0.05
Concentration**	4.92	4.62	4.56	0.02
Thoughts Only**	4.71	4.34	4.27	0.03
Better Understand*	5.34	5.13	5.12	0.01
Audio Sufficient*	5.12	4.95	4.89	0.01
Unaware Space*	4.39	4.16	4.07	0.01
Video Unnecessary**	2.73	2.82	3.29	0.05
Interesting**	4.52	4.18	4.11	0.04
Clarity	5.45	5.3	5.33	0.01
Good pace	5.19	5.17	5.07	0
Pace too slow	3.12	3.3	3.28	0.01

*p<0.05; **p<0.01

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30

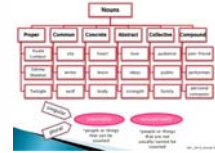
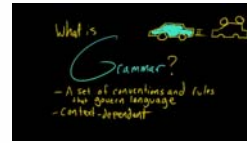
Study 1: Recall Performance



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31

Best Practice 15: Draw on the screen



This

Not This

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32

Do you need to implement all best practices?

- The issue of likeability/engagement vs. long-term retention

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Best Practice 16: Don't use computer generated voices...(?)



This



Not This

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34

Best Practice 16: Don't worry too much about accents or voices



This



This

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35

Study 2: Voice Comparison (Morris & Chen, *in press*)



- Classic computer voice from the 80s

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36

Study 2: Voice Comparison (Morris & Chen, *in press*)



1. Classic computer voice from the 80s



2. Modern computer voice (Siri & Alexa)

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37

Study 2: Voice Comparison (Morris & Chen, *in press*)



1. Classic computer voice from the 80s



2. Modern computer voice (Siri & Alexa)



3. Human voice (Midwest accent)

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38

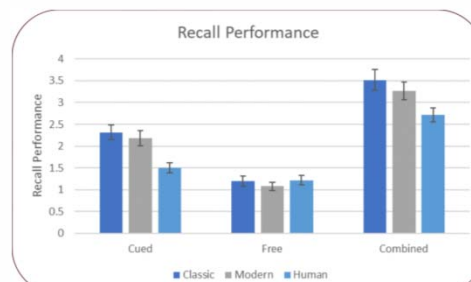
Study 2: Likeability Ratings



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39

Study 2: Recall Performance



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40



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41

Looking to future research ideas

1. Engagement vs. Learning
2. Recall vs. Transfer
3. ROI
4. Fishy best practices



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42

References

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43

Questions?

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44