



Storyboarding & the Principles of Designing Multimedia Learning

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Intended Learning Outcomes

By the end of this topic, participants should be able to:

1. Identify 1-2 key points that students should learn from watching the video;
2. Draw a concept map that illustrates how to address the 1-2 key learning points that you want your students to learn;
3. Write a script frame by frame;
4. Integrate various elements such as the content, graphics and animation that will best explain a concept or an idea;
5. Apply Mayer's principles of multimedia learning to design your slides;
6. Use the storyboard as your guide to design your prototype

Review:

Principles of Multimedia Learning

Multimedia Learning (Cambridge Press, 2001), Richard E. Mayer

Using Multimedia for e-learning (2017)

Reducing extraneous processing

Coherence

Exclude interesting but irrelevant material.

Signaling

Include vocal cues and/or visual highlights

Redundancy

Graphics with narration alone is more effective than also including on-screen text.

Contiguity

Place printed words near any corresponding graphics and coincide narration with related display.

Managing essential processing

Segmenting

Add self-pacing options to enable learners to process information before continuing.

Pre-training

Introduce key terms to allow learners to familiarize before having to work with them.

Modality

Present information about a graphic verbally rather than as text

Fostering generative processing

Personalisation

Present words in conversational style rather than formal style.

Voice

Narration should use a human voice rather than a computer voice.

Embodiment

Drawing graphics as you explain is more beneficial than explaining a presented drawing as it reflects a real-life social interaction

UNDERSTANDING THE DEVELOPMENT PROCESS

ADDIE Model for e-learning

ANALYSIS



Mapping out instructional design process (learning objectives; potential problems; and the learners' existing skills)

DESIGN



Deciding on the details that will go into the prototype (content, assessment instrument, exercise, media selection)

DEVELOPMENT



Translating the storyboard to a prototype using authoring software

IMPLEMENTATION



Implementing in class, delivered thru an LMS that tracks students progress

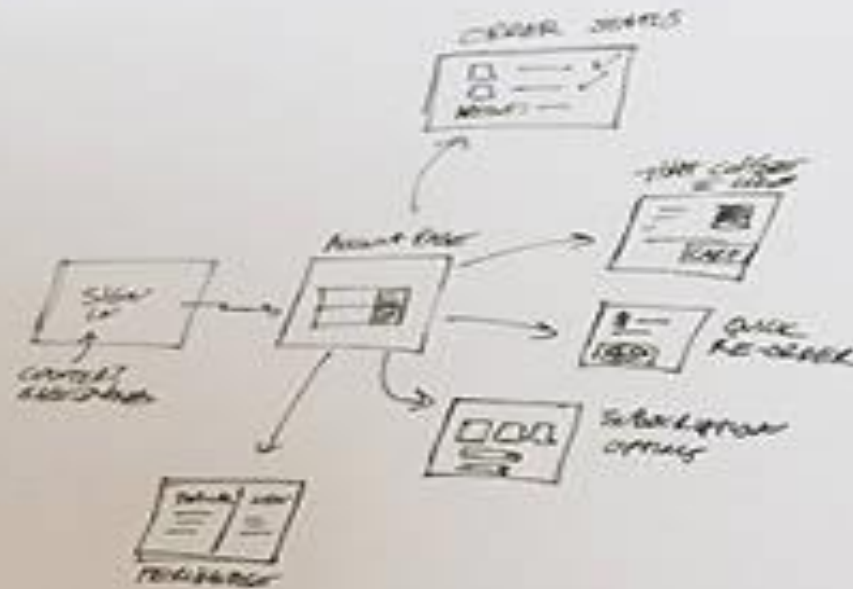
EVALUATION



Evaluating what works and what can be improved based on students' feedback

STORYBOARDING

Why start with a storyboard?



A background image showing a person's hands drawing a storyboard on a piece of paper. The storyboard consists of several rectangular frames connected by arrows, illustrating a sequence of steps. Some frames contain handwritten text like 'CLEAR SEATS', 'Account Page', 'TIME COLLECTOR', 'CHECK RE-ORDER', and 'Subscription OFFERS'. The person is using a yellow pencil to draw on the paper.

CREATES A CLEAR PLAN

HELPS YOU STAY FOCUSED

KEEPS YOUR THOUGHTS ORGANISED

KEEPS THE TIME SPENT ON A SLIDE

**INSTRUCTION COMES IN SEQUENCE AND DEPICTS HOW
DISTINCT ELEMENTS WILL RELATE AND FIT TOGETHER**

STORYBOARD

Activity 1: Begin with an end in mind

- Share a topic that you want to be converted to blended learning.
 - What is the topic?
 - What is the rationale?
 - Identify 1-2 key learning points to focus on

Activity 2: Focus

- Draw a concept map to address the **key learning points**.
 - What ideas are you trying to communicate based on the key learning points that you have identified? ([Example](#))
 - How does the storyboard communicate the most important concepts or ideas in the online video?
 - What will hold your learners' attention to the end?
 - How do you plan to connect it to the activities during the face-to-face session?

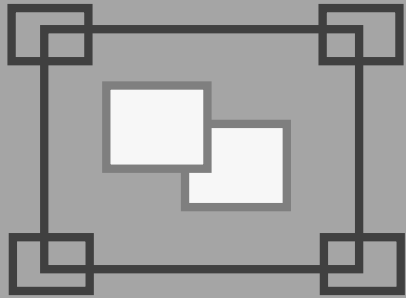
STORYBOARDING PROCESS

Drafting your storyboard

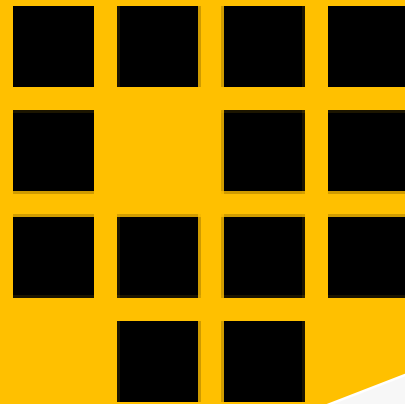
**SELECT AN
INSTRUCTIONAL
TECHNIQUE**



VISUALISE IT



**DEFINE THE
SEQUENCE**



**SUPPORT THE IDEA
WITH MEDIA**



WRITE SCRIPT

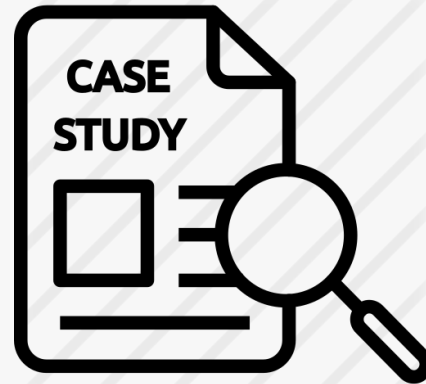


Selecting an Instructional Technique

- What is the overall message and conceptual grounding of the online resource?



STORYTELLING



SCENARIO-BASED APPROACH

Visualising it

- Where does the storyboard best communicate the key learning points?
- How do we make the ideas clear to the learners?

1 IDEA
PER
SLIDE

Activity 3: Visualising your plan

- Write down the instructional technique to use and describe how you intend to achieve it.

Work file: [storyboarding template.doc](#)

Defining the sequence

- What will make a good opening statement?
- How does the rest of the storyboard build on this opening? How are ideas linked together?
- For the conclusion:
 - What do you want your learners to remember?
 - How do you think the concluding idea/message will influence learners' "takeaway" from the video?
 - What makes the conclusion powerful?

first

next

then

finally

Activity 4: Defining the sequence

- Using as our concept map as your guide, write down the order of your storyboard. (1 idea per slide/frame)
 - Opening
 - Concept building
 - Conclusion

Support the idea with visuals

- How do the relationships among the elements (visuals, audio, text, animation) contribute to address the overall message/key learning points?
- Are the images, narration, and textual elements complement one another?

Activity 5: Using of visuals

- Identify the slides that need visuals to explain the concepts.
- Identify the media that will be most appropriate to explain the concept.
- Underline the text that you want to give emphasis.

Work file: [storyboarding template.doc](#)

Writing the script

- Are the ideas and its relationship communicated well? (Coherence principle)
- Does the script support the text and visuals displayed?
- Are there any technical jargons or acronyms that needs to be spelled out?
- Is the script/narration presented in an engaging tone?

Activity 6: Writing your script

- Write down the script that you want to say per slide during the recording.

Summary: Drafting your storyboard

SELECT AN INSTRUCTIONAL TECHNIQUE

Storytelling/case scenario



VISUALISE IT

Put the ideas together in one frame
1 concept per frame



DEFINE THE SEQUENCE

How does the sequence of the storyboard contribute to address the key learning points?



SUPPORT THE IDEA WITH MEDIA

Identify the media that will be most appropriate to explain the concept



WRITE SCRIPT

Write your script along with your idea frame-by-frame



[Sample storyboard](#) (in text form)

Criteria

Focus

- The storyboard clearly communicated the key learning points.

Structure

- The ideas are linked together.
- The flow of the storyboard is engaging.

Visual appearance

- The visual elements complement one another.
- The layout adheres to the Principles of Multimedia Learning.

Suggestions for improvement

- Do you see an idea that needs to be developed more, or to be developed differently?
- Are there any part of the storyboard seem potentially superfluous?

Tools to develop the prototype



Developing online resources using Camtasia Studio
CDTVOD1001_Self-Learn

[Sample prototype \(Mutation\)](#)

Examples of NUS module trailers

- [Natural Hazards](#)
- [Asking Questions](#)
- [Quantitative Reasoning](#)
- [What's your point? Writing Clearly and Concisely](#)
- [Public Writing and Communication](#)
- [Everyday Life of Chinese Singaporean: Past & Present](#)
- [Value-Focused Negotiations](#)

“It's not the specific media that creates learning,
it's the **educational design** that creates learning.”

– Richard Mayer

Thank you.

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