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Click Here! E-Learning Modules for Innovative Instruction and Learning

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E-Learning Modules for Innovative Instruction and Learning

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Objectives

1. Review the evidence related to the use of eLearning modules to promote learning.
2. Outline a plan for eLearning module creation.
3. Identify resources for eLearning module development.
4. Explain options for evaluating effectiveness modules.
What does the evidence show?

Background & Evidence

Background & Evidence

• no study reported negative impacts of e-Learning.
• enhance their understanding of the material
• performed slightly higher on the practical exam, but not all findings were statistically significant


Background & Evidence

- flexibility
- convenience
- study at own pace
- adapt to different learning styles
- assist with technology skills

Cottrell & Donaldson, 2013; Glogowska, Young, Lockyer, & Moule, 2011, Van Duijn, 2014
Background & Evidence

“faculty must identify and understand the learning preferences of millennials”

- Robb, 2014

Engelhard & Seo, 2015

“CIs were able to maintain best practices using just-in-time education, distributed clinical practice and reflection.”

~Engelhard & Seo, 2015
The 5 Steps

1. Define your topic
2. Build your team
3. Create content
4. Conduct Review
5. Implement & Gather outcomes

Define Your Project

- CHOOSE YOUR TOPIC
- DEFINE AUDIENCE
- DETERMINE LEARNING OBJECTIVES
- DETERMINE ASSESSMENT METHOD
Define Your Project:
**Choose Your Topic**

- Foundational knowledge
- Challenging content
- Learning domain

Define Your Project:
**Define Your Audience**

- Students, CIs, new faculty
- PTs, PTAs only or interprofessional
- Local vs. national
Define Your Project:  

Determine Learning Objectives

- Clearly state
- Follow verb recommendations
- Make sure they are achievable
Define Your Project: 
**Determine Assessment Method**

- Formative vs. Summative
- Dependent on purpose

Build Your Team

- MEMBERS
Build Your Team:
**Members could include**

- Director (you)
- Content expert
- Instructional designer/e-learning expert
- Software developers/engineers
- IT support
- Students
- Peer reviewer

**What do you think?**

**Question 1**
What are two topics you can think of that you would like to make into an e-learning module?

**Question 2**
Who would you need on your team to help develop the module?
Create Content

- CHOOSE SOFTWARE
- CHOOSE IMAGES
- GATHER EQUIPMENT
- CONTACT TALENT
- CONSIDER INSTRUCTIONAL DESIGN GUIDELINES
- FOLLOW ADA GUIDELINES
- EDUCATIONAL RESOURCES

Choose Software needed

<table>
<thead>
<tr>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nearly free</td>
</tr>
<tr>
<td>&lt;$200</td>
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<tr>
<td>$600-$1800</td>
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</tbody>
</table>
3 Create Content
Choose Software needed

Difficulty
- Easy
- Moderate
- Hard

Interactivity
- Almost none
- Something
- High
## Create Content

### Choose Software needed

<table>
<thead>
<tr>
<th>Software</th>
<th>Cost</th>
<th>Difficulty</th>
<th>Interactivity</th>
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</thead>
<tbody>
<tr>
<td>PowerPoint</td>
<td>$</td>
<td>🛠️</td>
<td>🛠️</td>
</tr>
<tr>
<td>Office Mix</td>
<td>$</td>
<td>🛠️</td>
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<td>ISpring</td>
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<tr>
<td>Imovie and Garage Band</td>
<td>$</td>
<td>🛠️</td>
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</table>

<table>
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<th>Software</th>
<th>Cost</th>
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<tbody>
<tr>
<td>VideoScribe</td>
<td>$$</td>
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<td>🛠️</td>
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<tr>
<td>Articulate Storyline</td>
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<tr>
<td>Articulate Studio</td>
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<tr>
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PowerPoint

Voice over Power Point converted into video

- Narrate slides through audio but no editing capabilities
- Useful for delivering small amounts of content

Office Mix

PPT plus interactive features & editing capabilities.

- Narrate slides through audio
- Add webcam recording for narration
- Embed video such as YouTube videos
- Insert quizzes and polls
- Obtain assessments and reports such as quiz results and engagement levels
**iSpring Suite**

**Robust PPT – allows creation of professional-looking e-learning modules through PPT**

- Video lectures by synchronizing narration w/ slides
- Interactive assessments with rich media, video, drag and drops, branching and flexible scoring
- Screen recording-no 3rd party needed
- Dialogue simulations to develop conversation skills
- Ready-made templates for creating 3D books, timelines, references, glossaries, catalogs

**Video Scribe**

**Whiteboard style animation video**

- Delivers content in engaging manner
- Able to stand alone or embed into other software
- Add images, text, music, voice over to canvas.
- Site does have library of images and soundtracks or you can upload your own.
iMovie

Video editing software by Apple for Mac and iOS; Moviemaker is the Windows equivalent.

- Combine text, images, audio, and video clips into a video
- Video can stand alone or embed into another software

GarageBand

Music creation studio inside Mac and iOS where you can learn, play, record, create, and share music creation.

- Includes software instruments, preset guitar and voice, and virtual session drummer
Articulate Studio

Presentation based elearning software, transforming PPT into an online format

- Articulate presenter to create, narrate, and annotate elearning content in powerpoint
- Articulate quizmaker to add quizzes and surveys
- Articulate engage to add media rich interactions
- Articulate replay to record screencasts with webcam

Articulate Storyline

Interactive (vs. presentation) based e-learning software that can create a media rich, highly interactive, immersive

- Learner driven
- Build any interaction you can think of
- Click or hover over any object
- Utilizes buttons, sliders, markers, and hotspots
Camtasia Studio

Screencast software with editing tools, animations, and effects.

- Zooming features, call outs, hotspots, quizzes,
- Precise capture window
- Webcam capabilities

What do you think now?

Which software would be most practical considering the learning objectives, your skill set and resources available?
Create Content
Choose Images

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Always remember, Air+ Low Density Emphysema causes the destruction of alveolar tissue and leads to air trapping. As a result, the lung tissue is less dense than normal lung tissue and fremitus is decreased.
If you have funding, set aside money for pictures.

Create Content

Gather Equipment

- Cameras
- Microphones
- Professional lighting
- Tripods
- Laptops
- Tablets
Create Content

Contact Talent

• Actors
• Models
• Voice talent
• Videographers

Create Content

Instructional Design Guidelines

• Volume and length appropriate
• Design layout is effective and organized logically
Create Content
Instructional Design Guidelines

- Interactive learning elements are utilized
- Design engages the learner by capturing and sustaining attention

Navigation instructions are explicit and consistently provided

Click “Next” to try another pathology.
Follow ADA Guidelines

ADA Guidelines

TRANSCRIPTS
Conduct Reviews

- Peer & Student Reviews
- Utilize rubric to guide feedback

Method & Practice of Education

Instructional Design

Rubric
Implement

- PILOT
- MEASURE OUTCOMES

Determine timing
Select people
Implement Measure Outcomes

Learning Effectiveness

- Exam Scores
- Lab Practical Pass Rates
- Lab Practical Item Retakes
- Student report of outside resources utilized
- Confidence of students in skills

CONFIDENCE

My confidence as of today in measuring ROM of the upper extremity.

0 1 2 3 4 5 6 7 8 9 10

0 - not confident
10 – extremely confident
CONFIDENCE

Q1. Multiple choice question about topic

Q1a. Confidence rating

A. I’m Positive
B. Pretty Sure
C. No Clue

Learning Effectiveness

Access & Flexibility of Learning Material
Implement Measure Outcomes

Learning Effectiveness

Access & Flexibility of Learning Material

Student Satisfaction

Sample questions
1. The modules helped me learn.
2. The amount of interactivity was appropriate
3. I want access beyond this semester
4. Focus Groups – qualitative analysis

Student Satisfaction
Implement Measure Outcomes

- Learning Effectiveness
- Access & Flexibility of Learning Material
- Cost Effectiveness
- Student Satisfaction

Implement Measure Outcomes

- Learning Effectiveness
- Access & Flexibility of Learning Material
- Faculty Satisfaction
- Student Satisfaction
Review of the 5 steps

1. Define your topic
2. Build your team
3. Create content
4. Conduct Review
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Resources
Websites for Software

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Educational Resources

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Thank you!!!!