

## First Principles of Instruction - iBook Textbook Creative Project

The textbook content and figure materials were provided by Dr. M. David Merrill the author of *First Principles of Instruction*. Dr. Merrill was interested in turning his static textbook into an iBook. This iBook falls in line with Dr. Merrill's mantra of making instruction more effective, efficient, and engaging. All images and examples shown in this document are copyrighted by Wiley (www.wiley.com) and reuse requires expressed written consent from Wiley and Dr. Merrill.

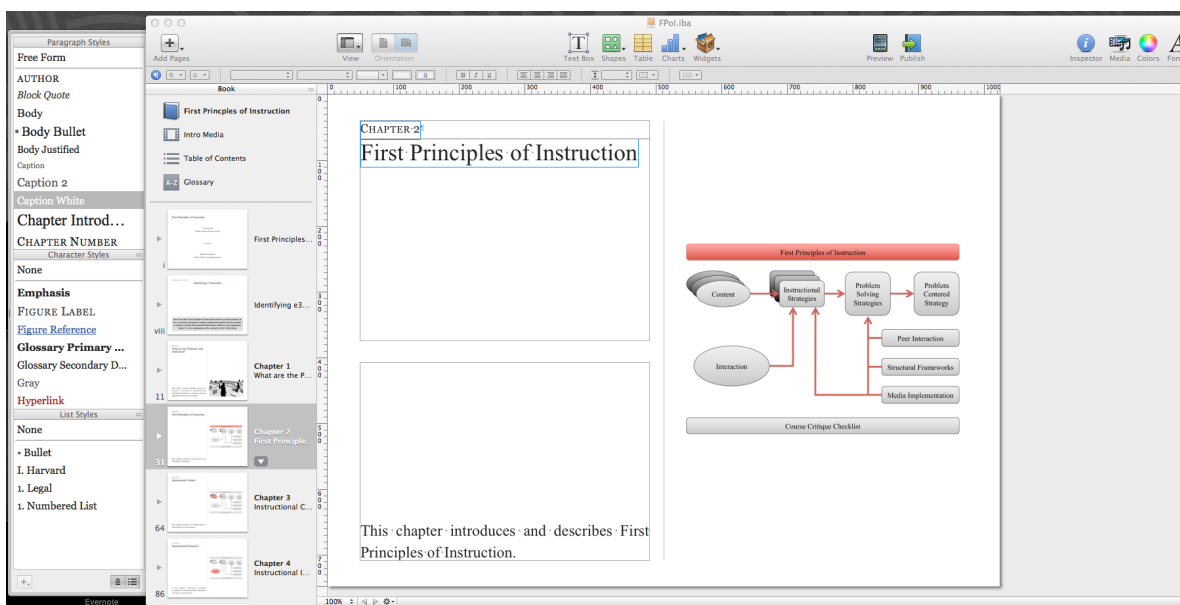
The images and examples provided in this PDF are of the finished product being displayed on an iPad.

*Note: This iBook Textbook was created on Apple's iBooks Author v1.1, and is being displayed/presented in this example on Apple's iBooks Author v2.0, display formatting may be distorted because of the update.*

### iBooks Author Interface

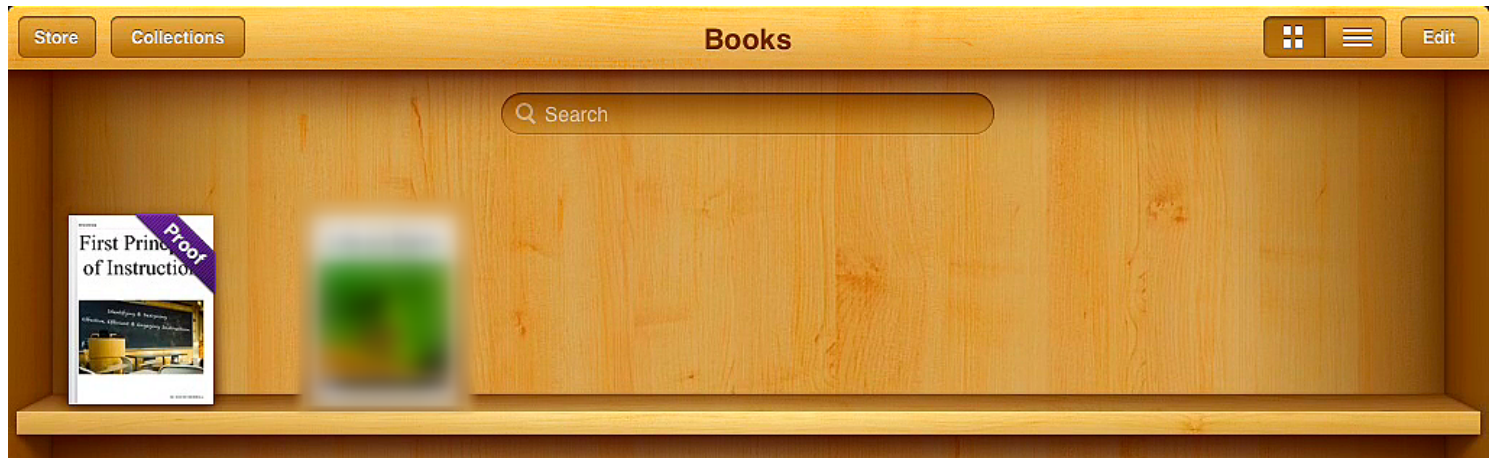
The interface displayed is the application by which an iBook can be developed. iBooks Author can be downloaded from the iTunes Store free of charge.

Many different templates can be found online, but it is recommended that a template be developed by the iBook creator. There are many issues with trying to customize a template to fit the author's needs.



## iBooks for iPad

Apple's iBooks iPad application allows for individuals to manage many iBooks and iBook Textbooks, the only restriction would be storage capacity on differing hardware (e.g. 16GB vs. 64GB storage capacities).



## Table of Contents and Navigation

The most important part of an iBook Textbook would be its Table of Contents (TOC). It is imperative that an iBook creator structure a solid TOC.

1. In this example the sections "Dedication" and "Preface" were structured separately and are active touch points.
2. The dots running along the bottom are chapter references and are a way for the user to jump quickly to chapters in the textbook.



# First Principles of Instruction

1

Dedication  
Preface



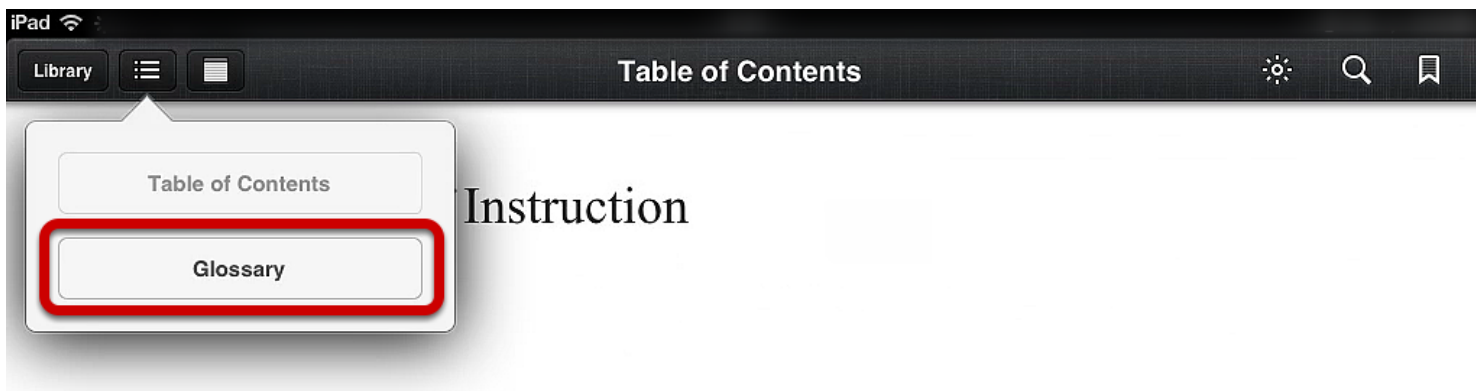
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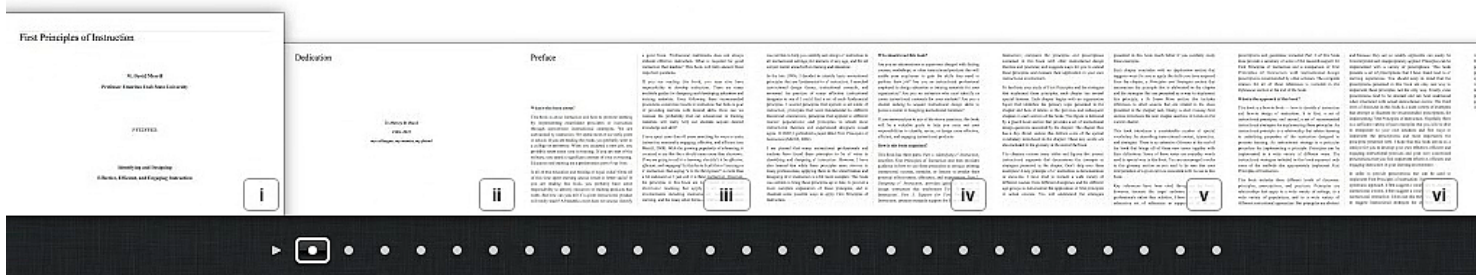


# Glossary

It is highly recommended the Glossary be the first content added because when the creation process moves forward you need to be able to create reference points for the user. This is so when a user selects a glossary term anywhere in the content, the iBook knows which term to reference. It is good practice to have your reference points ready before you begin building your project.



Dedication  
Preface

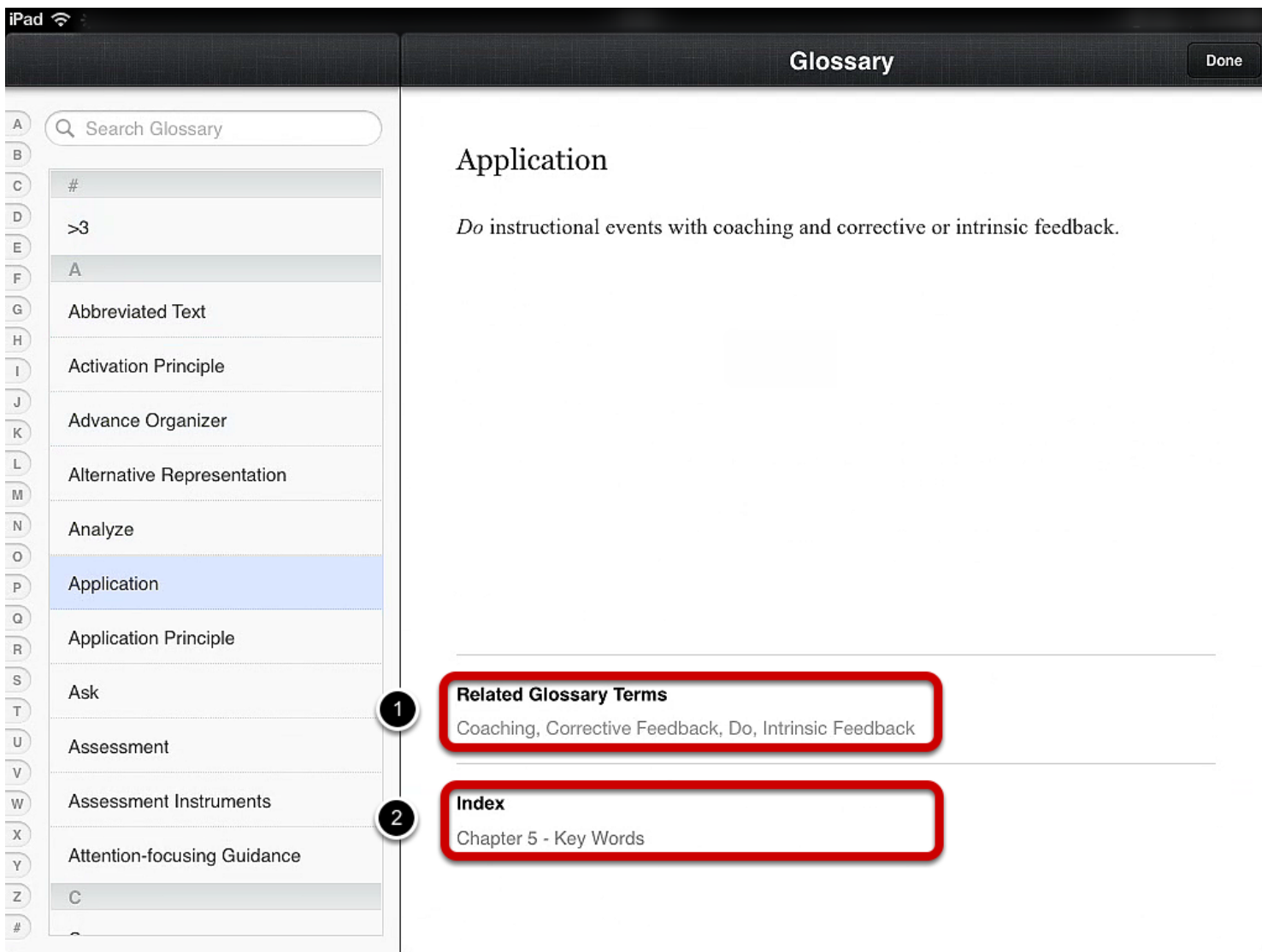


## Glossary

The Glossary allows the user to quickly reference related terms.

1. Related terms will jump to another spot in the Glossary.
2. Indexing the term will show what chapter the term is introduced.

Both of the items above are active touch points.



The screenshot shows an iPad interface for a Glossary. The top bar is labeled 'Glossary' and has a 'Done' button. On the left, there is a search bar and a list of terms. The term 'Application' is selected and highlighted in blue. The main content area displays the definition of 'Application': 'Do instructional events with coaching and corrective or intrinsic feedback.' Below the definition, there are two red-bordered boxes. The first box is labeled 'Related Glossary Terms' and contains the text 'Coaching, Corrective Feedback, Do, Intrinsic Feedback'. The second box is labeled 'Index' and contains the text 'Chapter 5 - Key Words'. Two numbered callouts, '1' and '2', are placed to the left of the first and second boxes respectively, indicating their active touch points.

# Content

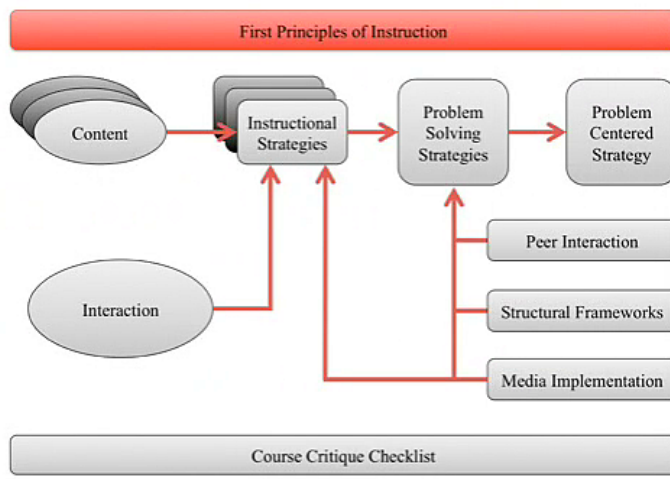
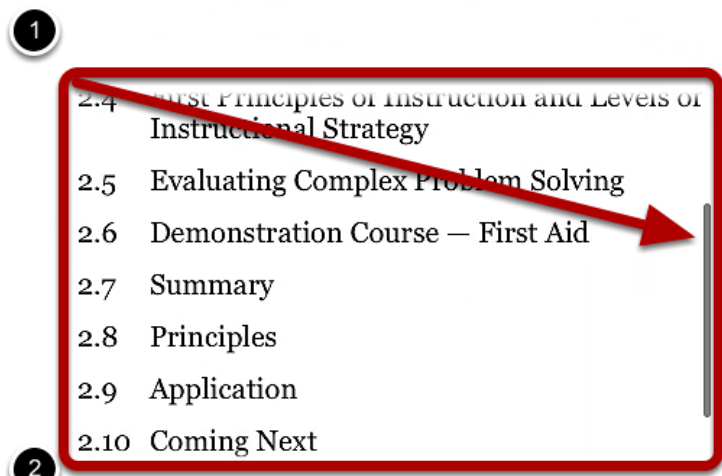
Each chapter begins with the following display:

1. Each section is interactive and selectable, it is a scrollable area for the user to quickly identify sections of the chapter.
2. Individual pages can be quickly sorted through and selected, this section area is also scrollable.



## CHAPTER 2

# First Principles of Instruction



## Notes, Searching, and Bookmarks

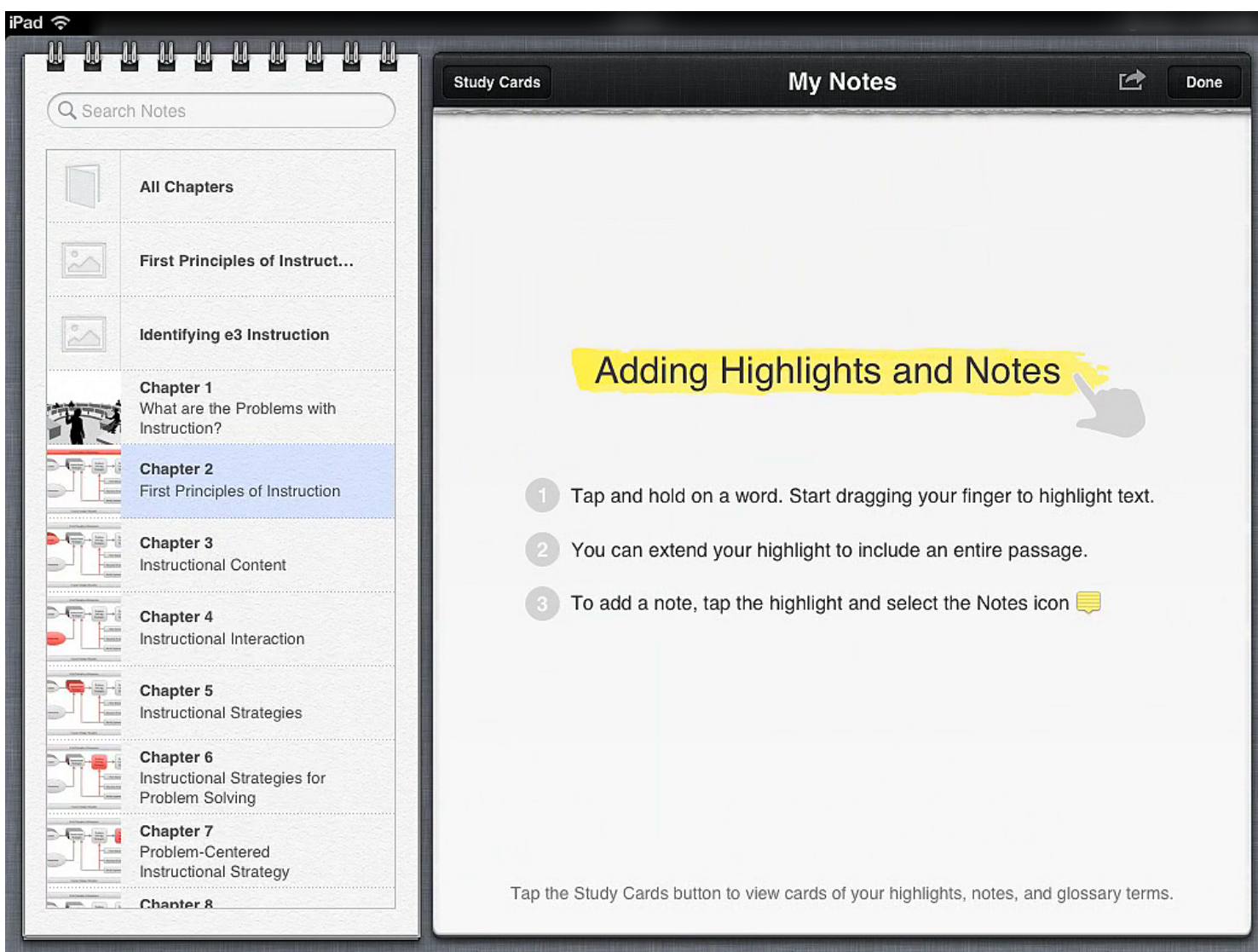
Using technology to improve learning.

1. Notes can be accessed from the iBook navigation ribbon.
2. Searching the iBook is as simple as typing a word or a page number for even quicker access to the content needed by the user.
3. Bookmarking is pretty self explanatory.

The screenshot shows an iPad displaying an iBook. At the top, the navigation bar includes a 'Library' button, a hamburger menu icon, a document icon (circled with a red box and labeled '1'), the title 'Table of Contents', a search icon (circled with a red box and labeled '2'), and a bookmark icon. Below the navigation bar, the main content area displays 'CHAPTER 2' and the title 'First Principles of Instruction'. A table of contents lists sections 2.1 through 2.6. On the right side, a 'Media Implementation' panel is visible, featuring an 'Add Bookmark' button, a 'No Bookmarks' message (with a circled '3'), and a 'Recently Viewed' section showing 'Page 31' and 'None'. At the bottom, a 'Course Critique Checklist' button is present. The bottom of the screen shows a page navigation bar with page numbers 35, 36, 37, 38, 39, and 40.

## Notes

The Notes tool allows the user to highlight and add necessary notes to any portion of the iBook for quick reference.



The screenshot shows an iPad interface with a table of contents on the left and a 'My Notes' screen on the right. The table of contents lists chapters from 'All Chapters' to 'Chapter 8'. The 'My Notes' screen has a yellow highlight on the text 'Adding Highlights and Notes' and a list of three numbered steps explaining how to use the tool.

Chapter	Content
All Chapters	
Chapter 1	What are the Problems with Instruction?
Chapter 2	First Principles of Instruction
Chapter 3	Instructional Content
Chapter 4	Instructional Interaction
Chapter 5	Instructional Strategies
Chapter 6	Instructional Strategies for Problem Solving
Chapter 7	Problem-Centered Instructional Strategy
Chapter 8	

**Adding Highlights and Notes**

- 1 Tap and hold on a word. Start dragging your finger to highlight text.
- 2 You can extend your highlight to include an entire passage.
- 3 To add a note, tap the highlight and select the Notes icon 🗒️

Tap the Study Cards button to view cards of your highlights, notes, and glossary terms.

## Adding Notes, Creating Study Cards

Not only can the user use the highlighted portion of the iBook to quickly reference the material, but the user can create study cards with the highlighted information.

iPad

### GUIDANCE

Presenting information and showing its application to specific situations are the fundamental instructional events of an instructional strategy. However, the relationship of the information to the specific applications may not be clear to learners. Guidance provides direction to learners for aspects of the demonstration in a specific situation.

Guidance may also provide directions to learners for relating the information and its application to a previously acquired skill or knowledge structure. Appropriate guidance enhances the learning that results from a demonstration. The guidance corollary states:

### MULTIMEDIA

Because it is so easy to include, the multimedia in instructional products too often fails to enhance learning and in some instances actually interferes with learning. Too often graphics have little relevance to the content being taught. Too often video and animation is used merely to make the instruction more attractive with the hope of increasing the interest of learners in the material. The appropriate use of multimedia is to implement prescribed instructional events. When multimedia is used merely to provide interest or make the instruction more attractive then it is more likely to distract from rather than promote learning. The multimedia

corollary

states:

**Learning is promoted when multimedia implements prescribed instructional events and functions**

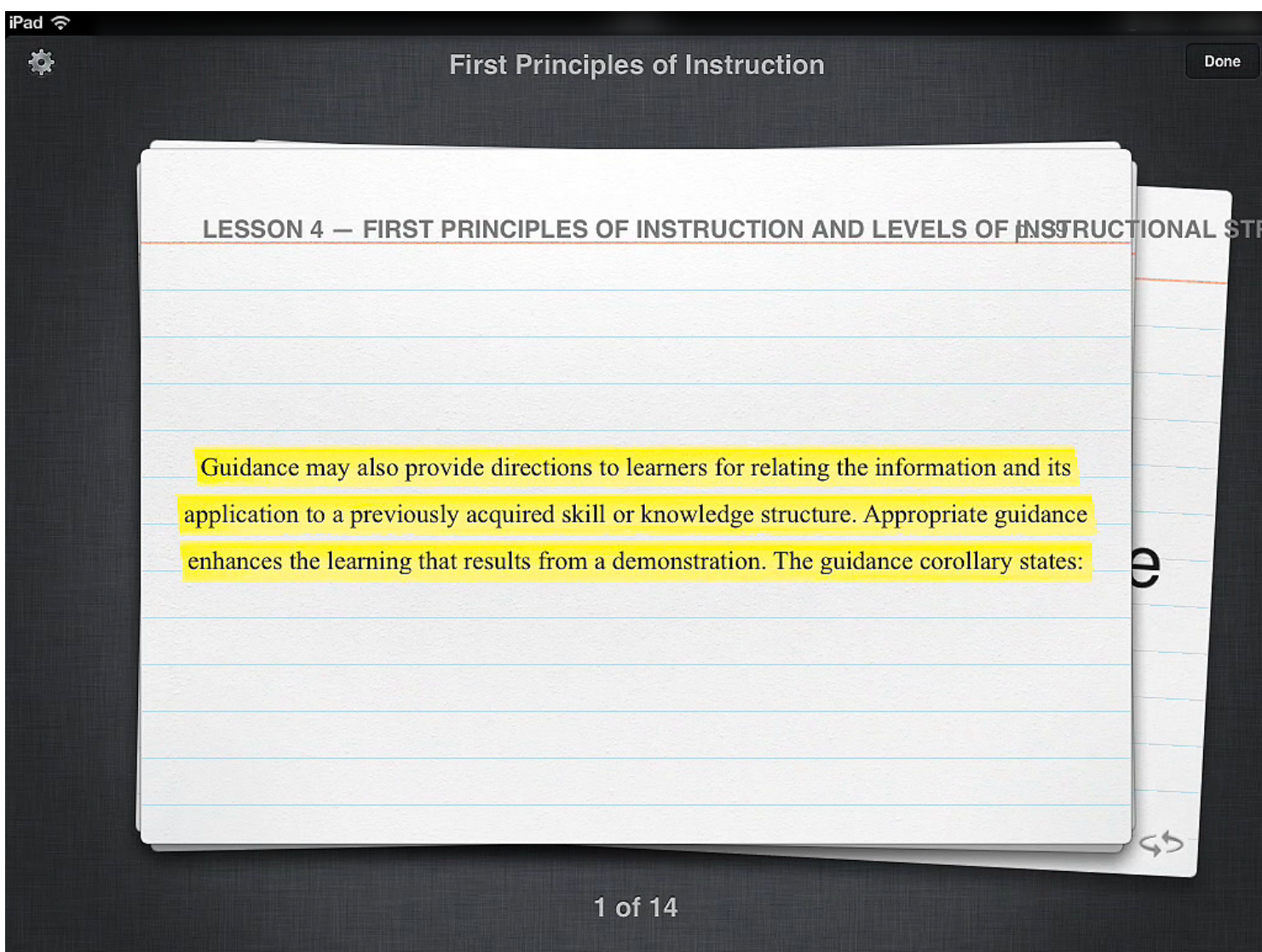
If you have the opportunity to revise a level 0, information-only instructional strategy, you will get a significant increment in learning by adding appropriate demonstration to illustrate the information presented. The demonstration principle is elaborated in Chapter 5 and Chapter 9.

### APPLICATION (LEVEL 2)

A level 2 instructional strategy adds application to an information plus demonstration strategy. It is surprising to me that even though there is almost universal agreement on the importance of applying knowledge to real world problems, so much instruction merely includes a few multiple-choice questions that are labeled practice. Such remember-what-you-were-told questions do little to promote learning. Skill development occurs when learners have an opportunity to do it, to apply the skill they have acquired to a variety of specific problems. Remembering information is not application; remembering information seldom prepares learners for applying their skill in real-world situations. *Application* requires learners to use their skill to complete specific problems. Consistent application for *kinds-of*

## Study Cards

Study cards are created with highlighted material and can be edited to fit the needs of the user, by the user.



## Interactivity

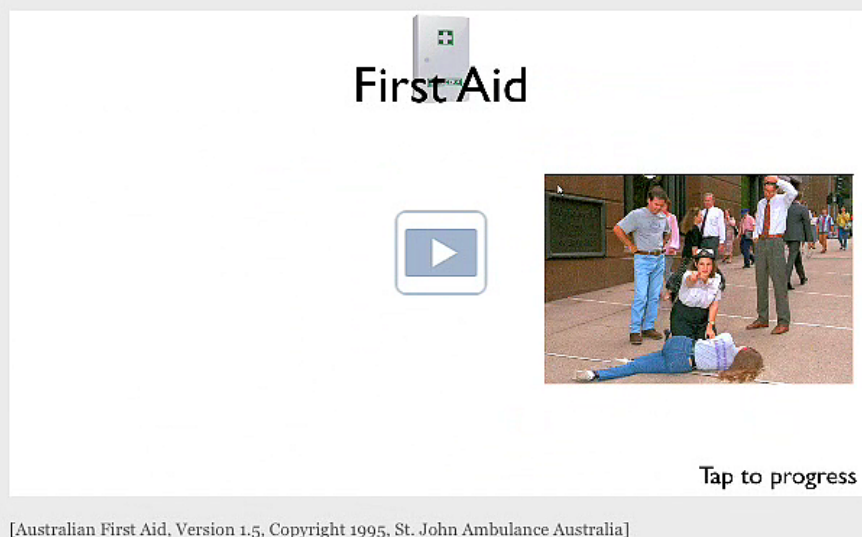
Figures are no longer static. Simulations, examples, and demonstrations can now be built into the textbook using different software. Importing the simulation is fairly simple, but you must know which software is compatible with iBooks Author.

## OPENING SIMULATION

After registration, the course begins with a brief interactive scenario, whose design is presented in Figure 2-2. The figure shows the learner's actions and the systems responses to it. What is the purpose of this opening scenario? Does it help learners recall emergency situations from their own experience where first aid was needed? Does it provide a reason why learners may want to take the course? Does it help motivate learners to acquire the skills taught in the course?

Did you remember the cycle of learning that starts with activation? What prior experience is it likely that learners have that is relevant to this course? Does the opening scenario help them recall this relevant experience? What is a probable mental model that a learner taking this course might already have? Does this simulation help the learner activate this mental model?

FIGURE 2.2 Opening Interactive Scenario - Activation



**My comments:** Most learners have probably witnessed an accident where first aid was required. The opening scenario presents a somewhat typical situation with the hope that it will help learners recall similar situations that they may have witnessed. Many learners will already have at least a minimal idea of what to do in case of an accident.