

Designing learning support into iBooks Author

"Poorly designed systems can create new barriers to participation in society, but good universal design can empower everyone to participate as equals." Professor Norman Coombs

At the core of Apple's iOS are a wide array of accessibility options to enable users to personalise how they perceive content and interact with their devices. The options are examples of universal design in action. A universal design approach aims to create 'products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation'

Understanding how to personalise these accessibility options should be part of all educators professional toolset as it allows educators to support learner variability. Providing seamless access to learning devices and materials that can be easily personalised ensures that all students have the opportunity to develop the knowledge, skills and attitudes to become expert learners. Expert learners possess specific skills and attitudes and a capacity for sustained learning which are essential to living and working in the twenty-first century.

Another part of our professional toolset is iBooks Author. The intuitive nature of iBooks Author empowers educators to focus on applying the Center for Applied Special Technology's (CAST) [Universal Design for Learning Guidelines](#) (UDL) to create and publish rich, engaging learning materials that include learning supports and scaffolds to empower all students and support them in becoming expert learners.

A suggested professional learning pathway to creating more universally designed iBooks may be:

1. Identify the built-in accessibility options of your iPad as well as the functionality of the iBooks and [iTunesU](#) apps as this is the core of the 'learning environment' for which you are publishing content. For example consider how the capacity to highlight text and take notes can be utilized to maximize the generalization and transfer of knowledge. (Check out our iOS scavenger hunt resource.)
2. Before creating your title in iBooks Author read and consider how to implement the strategies outlined in Luis Perez's "[iBooks Accessibility](#)." Luis's book provides guidance on how and why to make your iBook title more accessible.

3. Before creating your title in iBooks Author read and consider how to implement this set of strategies which complement Luis's book by focusing attention on building in learning support features.
4. Examine how to extend the the UDL capability of your iBooks title by utilizing 3rd party widgets such as [Class Widget](#) or by developing your own custom [Widgets](#) using tools such as [Tumult's Hype](#) or Adobe's [Edge](#)

Strategies for building in learning support

What follows are by no means a definitive or exhaustive set of strategies. The key lies in educators thinking flexibly and planning for the potential misunderstandings, misconceptions, and areas where learners may meet barriers to learning.

Learning goals

Ensuring that students are aware of the learning goals for your iBooks title and individual chapters gives clarity of purpose, focuses learner attention, and provides a reference point for self assessment and reflection.

Solution

- Create a paragraph style for learning goals that will help learners focus their attention.
- Break long-term goals into reachable short-term objectives
- Consider how review widgets can be used to pre-test prior knowledge.

Big Ideas

Graphic organizers, mind mapping and concept maps allow students see how ideas are connected and realize how information can be grouped and organized. Research into visual learning demonstrates how new concepts are more thoroughly and easily understood when they are linked to prior knowledge.

Solution

Many visual learning [tools](#) such as [Inspiration](#) enable the export of their content into image or HTML formats which can then be brought into iBooks Author. Using the Interactive Image widget will allow for further annotation of the image.

Illustrating concepts

Whilst text may be easier for a teacher to create, it can be a weak format for demonstrating and explaining concepts and processes. Alternative formats such as simulations, images or interactive graphics can be more effective communicators. That said, it is important to provide captions and alternatives for audio and video content so that it is perceivable by all users.

Solution

- Be clear about the concept or processes to be explained.
- Critically reflect upon the relative strengths of each communication format (images, charts and widgets).
- Avoid irrelevant rich media content that does not support the education goal.
- Script any audio in a conversational style using first and second person

Coaches

Virtual coaches prompt students to 'stop and think.' Virtual coaches enable the modelling of successful decision-making with competent mentors. They can also be utilised to demonstrate and explain concepts.

Solution

- Use iMovie or PhotoBooth to capture you as the virtual coach. Alternatively use a face puppet created with Reallusion's [CrazyTalk](#). (Don't forget to caption your video using tools such as Synchrimedia's [Moviecaptioner](#)!)
- As an alternative, use 'Call out' boxes with a defined paragraph style.

Glossary and lookups

Glossaries support the clarification of vocabulary and symbols for all students. The iBooks app enables students to call up the glossary by simply touching the word to open the definition in a way that does not interrupt the flow of the students' attention.

Solution

Use the built-in Glossary feature within iBooks Author. Ensure that related glossary terms are cross referenced.

Summaries and reviews

Summaries and quizzes can be used to aid memory and maximise the transfer and generalization of information.

- Summaries focus the learner on the salient information and concepts.
- [Research](#) indicates that learners have a higher retention of content after reading if they had completed an test *after* reading the text.

Solution

- Create summaries at the end of each chapter. Give consideration to the paragraph style and heading structure so as to clearly flag the purpose of the content and focus learner attention.
- Include review widgets so learners can self test and reflect upon what they have learnt in that chapter.