Managing and Supporting iPads in the Classroom

Clint Stephens
Southwest Educational
Development Center
clint@sedck12.org

Permalink: http://goo.gl/vv1UY
http://sedcclint.com - iPad or UCET tag

Overview

* Before and after iOS 7

* New iOS 7 Powers!

* Ownership models

* Deployment strategies

* Deployment & management tools

* Volume Purchasing Program for apps

Before iOS 7…

* The Apple ID that was used to purchase an app or to redeem a VPP (Volume Purchasing Program) code owned that app for time and all eternity.

  * Now, you can assign and revoke apps with Supervision!

* Apple ID's can't be deleted or merged. Still true.

* Are apps an asset or a commodity? Do you care who 'owns' the apps?

  * No longer an issue if you use Configurator &/or an MDM

New iOS 7 'Powers'

* Apple Configurator 1.4.x (requires OS X Mountain Lion and iTunes 11.1 or later):

* Support for new iOS 7 features and restrictions, including:

  * Allow modifying account settings

  * Allow AirDrop

  * Allow connecting supervised devices to any Mac

  * Configure Web Content Filter

* Configure AirPlay mirroring destinations and passwords

* Configure AirPrint printers

* Configure Managed Open In

* Allow Control Center or Notification Center on lock screen

* Configure Limit Ad Tracking setting

* Install fonts

New iOS 7 'Powers'

* A new Setup tab in Prepare, which provides options such as:

    * Enroll multiple unsupervised devices in MDM without tapping each device

    * Complete setup assistant and enroll Apple TV in MDM without using the remote

* Improved UI for installing a single profile on unsupervised devices.

* Addresses an issue that could cause one redemption code to be lost when importing a Volume Purchase Plan spreadsheet.

* A new "Allow devices to connect to other Macs" option that allows supervised devices to sync photos and videos with other Macs.

Ownership Models

* Depending on your answer, you can follow 3 deployment app ownership models:

  * Personal Ownership

  * Institutional Ownership

  * Layered Ownership

Personal Ownership Model

✳ Pros:

  ✳ Typical to normal user experience

  ✳ Deployment is fast

  ✳ Limited to no prep work on devices needed

  ✳ End user can customize their device and experience

Personal Ownership Model

❉ Pros:

   ❉ Can still use Apple Configurator or Meraki for profile management/setup/rules, etc.

   ❉ 1 Apple ID can be used on many devices

   ❉ Using iCloud, any apps purchased (free or paid) will be automatically downloaded to all devices tied to that account

   ❉ Can sync wirelessly and backup to iCloud

Personal Ownership Model

✳ Cons:

✳ End user is responsible for ongoing maintenance (backup, updates, etc.)

✳ End user owns all apps and content (both purchased with individual credit card and VPP apps)

✳ Licensing (legal?) issues if an app is found on 1+ devices?

Deployment with Personal Ownership

✳ You buy the devices

✳ Hand them out and you are done!

✳ People use their own Apple ID's, buy their own apps, backup and sync on their own.

✳ Institutions can purchase iTunes gift cards to buy apps

✳ app = commodity

Institutional Ownership Model

✳ Pros:

  ✳ District/school retains app ownership

  ✳ Best (according to Apple) if students are under 13*

  ✳ *Apple now allows the <u>creation of an Apple ID</u> for those under 13 years (no COPA violation)

Institutional Ownership Model

✳ Pros:

  ✳ If a student syncs to another computer, all apps are erased from the device.

  ✳ Device restrictions can be enabled to prevent users from installing or deleting apps or making other changes to the device configuration (i.e. App Store is disabled), even removing the configuration profiles

Institutional Ownership Model

* Cons:

  * ALL app purchasing (free and paid) will have to be done by institution or on each teacher's computer (sync machine)

  * Any app updates will have to be done by syncing the device with the teacher's computer (sync machine) with iTunes logged into institutional Apple ID (if App Store is disabled)

Institutional Ownership Model

✳ Cons:

  ✳ iCloud can not be used for backup*

  ✳ Recommended that the App Store be disabled on these devices (but you may want to do that anyway)

*SO SAYS APPLE

Deployment with Institutional Ownership

* You buy the devices

* You set up an institutional email address and in turn an institutional Apple ID, with which all app purchases are made

    * app = asset

* Deploy with Apple Configurator &/or Meraki Systems Manager, with device restrictions, and hand out.

* Any backups or updates are done by you

Layered Ownership Model

* Pros:

  * Both parties retain ownership of the apps purchased.

    * If the teacher moves, they remove their Apple ID and the apps that they purchased are removed from device.

  * Devices retain a base of installed apps that belong to the institutional Apple ID

Layered Ownership Model

✳ Pros:

   ✳ Institution can purchase new apps with VPP in iTunes on teacher's sync machine and apps will be installed at the next sync.

   ✳ Teacher can get new paid or free apps on the device for immediate use - gives them more sense of ownership and will be more likely to protect the device.

Layered Ownership Model

 * Pros:

   * iCloud backup is enabled, which will speed up syncing since all that will need to happen is to install or update apps purchased by the institution.

Layered Ownership Model

✳ Cons:

  ✳ Updates and syncing can get confusing since there are apps owned by two different Apple ID's

  ✳ Users will see 'error' messages and could potentially erase apps by selecting the wrong options when synching.

Layered Ownership Model

* Cons:

  * These warnings could be turned off if tech gets in and do the first sync with the teacher's computer (sync machine) before classroom use and disable warnings.

  * App store must NOT be disabled.

Deployment with Layered Ownership

✳ You buy the devices

✳ You set up an institutional email address and in turn an institutional Apple ID, with which initial app purchases are made

   ✳ app = asset, but personal apps can be purchased

✳ Deploy with Apple Configurator &/or Meraki Systems Manager, with device restrictions **before iPad is set up**, and hand out.

Deployment with Layered Ownership

* End users set up and sign in with their own Apple ID's, and purchase any additional apps of their choosing.

* If institutional apps need updating, they sync with institutional sync machine

* If their apps need updating, they sync with iTunes on personal/teacher computer or update through App Store

* Backup is done to iCloud

Which Strategy To Choose?

✳ **App Ownership**: Whose apps will be allowed on this device?

　✴ End user only: Consider Personal Ownership

　✴ Institution only: Consider Institutional Ownership

　✴ Both: Consider Layered Ownership

✳ This dilemma is MUCH easier to handle with iOS 7, Apple Configurator and Volume Purchased Apps

Which Strategy
To Choose?

✴ **Device Personalization**: Are users allowed to personalize settings and content on their devices?

　✴ Yes: Consider Personal Ownership or Layered Ownership

　✴ No: Consider Institutional Ownership

Which Strategy To Choose?

✳ **Device Update Frequency**: How often should apps be updated on the devices?

  ✳ Frequently: Consider Personal Ownership or Layered Ownership

  ✳ Infrequently: Consider Institutional Ownership or Layered Ownership

Notes on Deployment Strategies

✳ Create new email accounts to be used to create Apple ID's that are tied to a device or department, unless you treat apps as a commodity.

✳ These ID's can be easily transferred to someone else when the device or manager moves on

✳ For example, pchs.math.apps@pchs.org

Notes on Deployment Strategies

✳ Apple ID's can be created without a credit card associated with it

 ✳ http://support.apple.com/kb/HT2534

 ✳ Can feed the account with VPP vouchers* or gift cards

 ✳ As long as that account has not been used for an Apple ID before

Notes on Deployment Strategies

✳ If using 1 Apple ID for a set of iOS Devices...

  ✳ Licenses should be purchased for *each* copy of the app you are using

    ✳ 30 iPads with Angry Birds = 30 licenses

Deployment Tools

* Apple Configurator

  * Apple Configurator can be used in several different ways to make configuration and deployment of iOS devices within your organization both easy and efficient.

  * Can be used to Prepare, Supervise, or Assign iOS devices

  * *Mac only at this time.

    * iPhone Configuration Utility for Windows

Deployment Tools

✳ Apple Configurator - Prepare?

 ✳ You can prepare a set of new iOS devices that are configured only once and then deployed to users.

 ✳ Update devices to the latest version of iOS, install configuration profiles and apps, enroll the devices with your organization's Mobile Device Management solution, and then hand them out.

 ✳ Preparing devices is a great deployment option for enterprises and schools that provide iOS devices to employees or students for day-to-day use

Deployment Tools

* Apple Configurator - Supervise?

  * You can supervise a set of iOS devices that you want to control and configure on an ongoing basis.

  * Apply a configuration to each device, and then reapply it after each use simply by reconnecting the device back to Apple Configurator.

  * Supervision is an ideal option for sharing devices among students in a classroom or a lab or teachers in a school.

  * VPP Apps can be assigned and revoked with Supervised devices with iOS 7

Deployment Tools

✳ Apple Configurator - Assign?

✳ You can assign supervised devices to specific users in your organization

✳ Check out a device to a user and restore the user's backup (and data!) to that device; then check the device back in and back up the user's data for later use, possibly on a different device

✳ Works well in educational settings where students need to work with the same data and documents over time, regardless of which device they're given

Notes on Configurator

* After selecting apps for installation, you MUST check the box next to each app to automatically install them once you have connected it to 'Prepare' it for deployment.

* With iOS 7 and Configurator 1.4.x, updates and app installation/removal no longer requires a password for every app on every device!

Configurator Demo

Configurator Notes

✳ To install VPP apps and not burn one of the installation codes on the Mac running Apple Configurator, and If you do not already have a copy of the app on your computer, use the first redemption code in your spreadsheet to purchase it in iTunes. After using this code, re-download the spreadsheet and import it into Apple Configurator again. This allows Apple Configurator to automatically reassign this code to one of your devices.

✳ When I tried to Prepare my first device (with Supervision enabled so that I can add/remove installed apps), I had an error stating that it could not continue because Find My iPad was enabled on the device. Good for security and stolen devices! More information on this here. Find My iPad can be reinstalled and enabled, but it will need to be disabled if you want to Prepare it again for another use. App updates from Configurator still work!

Configurator Notes

✳ Once a device has been Prepared with Supervision enabled, the devices now show up in the Supervise tab.

✳ First device I prepared, after an iOS update, had me go through a few setup screens even though I told it to skip them all. However, they were very simple questions that any end user could answer: choose the language and country, select which of the pre-configured WIFI networks to join, and tap Get Started. That's it!

✳ When installing apps, if you have installed (paid or free) apps under multiple Apple ID's, you need to authorize all of the Apple ID's in iTunes (Store menu —> Authorize This Computer…)

Configurator Notes

✳ When I pushed out 5 apps (4 free, one paid with VPP Code), NO APPLE ID PASSWORD WAS REQUIRED! HUGE improvement!

✳ Now, to revoke a paid app, I just uncheck it in it's installed app list (in the Supervision area) and click Apply. The app is uninstalled and the VPP code is now available for other devices. To install the VPP app(s) on another device, just check the box next to it, click Apply and it's done. Another HUGE improvement!

Deployment Tools

✳ Meraki Systems Manager

   ✳ Scalable cloud based mobile device management (MDM) system

   ✳ Meraki's Systems Manager provides over-the-air centralized management, diagnostics, and monitoring for the mobile devices managed by your organization.

      ✳ Wireless deployment of Web Clips and Free apps (VPP app deployment coming soon).

   ✳ Meraki Systems Manager is a **free** tool!

Deployment Tools

* Meraki Systems Manager - Getting Started (PDF Guide)

    * Sign up for a free account

    * Set up you initial network, iOS profiles, web clips and apps

    * On each device, head to m.meraki.com, enter in your network ID, and install the profile on the device.

    * You can now remotely install web clips & free apps (for now), monitor device location and usage - even remotely lock or wipe the device.

Meraki Demo?

Apple
Volume Purchasing Plan (VPP) for Apps

Apple VPP: What is it?

* This is the main and best way to purchase apps, in small or large quantities, for your school or district iOS devices.

* All purchasing of VPP apps are done at the VPP site, and not in iTunes. http://volume.itunes.apple.com/store

* Most apps have a volume discount, where if you buy 20+ licenses at a time, you receive a 50% discount on each license.

* This program is an opt-in for developers, so not all available apps are discounted in volume.

Apple VPP: What is it?

* Books from the iBooks store, including textbooks, can be purchased with the VPP. Mac apps too!

* Not all apps are included in the VPP. They must be education or business related. No Angry Birds!

* Can be funded with Volume Vouchers or institutional credit cards.

* Can search the VPP store by app name or URL

Apple VPP: Program Manager

* Each organization must have at least one Program Manager.

    * Can be an existing Apple ID or Apple Authorized Purchaser

    * Ad-hoc account with the only function of creating new 'shopper' accounts called Program Facilitator.

Apple VPP: Program Facilitator

* Program Facilitator - 'Shopper' accounts

    * MUST be a real, institutional email account that has NEVER been used to create an Apple ID

    * Email addresses for PF's should be based on location or position, not on an individual - easier to pass on purchasing, management and ownership of apps

    * For financial control - CFO, IT Dept., Department Head

    * For content control - principals, curriculum managers, teachers

Apple VPP: Program Facilitator

✳ Program Facilitator - 'Shopper' accounts

  ✳ These accounts create a complete purchase history

  ✳ Program Facilitator accounts funded by Volume Vouchers or by institutional credit card

  ✳ Shop and purchase apps at: http://volume.itunes.apple.com/store

  ✳ Once purchased, PF receives a spreadsheet of redemption codes or links to distribute to end user accounts

Apple VPP: End Users

* End Users - those who use devices and apps

* Can be any Apple ID - regular pre-existing Apple ID's or Program Managers & Program Facilitators

* Use a redemption code in iTunes or a redemption link that will take them to iTunes to purchase and download app

Apple VPP: Getting Started

✳ To learn more about the program:

  ✳ Visit the main VPP site:
  http://www.apple.com/education/volume-purchase-program/

  ✳ View the FAQ's:
  http://www.apple.com/education/volume-purchase-program/faq.html

  ✳ Attend a webinar:
  http://edseminars.apple.com/ASVPP/ondemand

Apple VPP:
Getting Started

✳ To Enroll as a VPP Program Manager, head to

   ✳ http://edu-vpp.apple.com/asvpp.html

✳ Once your account has been approved, you can create Program Facilitator accounts at

   ✳ http://edu-vpp.apple.com/asvpp_manager/

✳ Program Facilitators can redeem Volume Vouchers, shop for and purchase apps at

   ✳ https://volume.itunes.apple.com/store

Apple VPP: Volume Vouchers?

✳ Volume Vouchers are like BIG iTunes Gift Cards that can be purchased from the Apple Store for Education

   ✳ Tax exempt

   ✳ In denominations of $100, $500, $1000, $5,000 & $10,000

   ✳ Can be applied to one AND ONLY one Program Facilitator account - can't split up a $500 3 ways.

      ✳ Buy multiple small denominations to be sure.

Apple VPP:
Using Volume Vouchers

✳ Purchased from Apple Store for Education

✳ Handed off to a Program Facilitator to start shopping

✳ Vouchers will be used up before a credit card or purchasing card

✳ Vouchers and redemption codes do not expire

✳ If you will eventually need more than 10 copies, buy 20 with the discount.

✳ Best to buy in bunches, not per-request for discounts

Apple VPP:
After Purchase of Apps

* Redemption codes are emailed back to Program Facilitator for distribution to end users.

* Also sent in an Excel file with the redemption codes and a link to redeem that code - can be clicked or tapped on from device to be downloaded and installed.

* Excel file used for app code management in Apple Configurator

* Once a code is used, it's marked as 'Redeemed' and can not be used again (unless device is Supervised in Configurator).

Apple VPP:
After Purchase of Apps

* Can be done one at a time, with a mail-merge to automatically send out many at a time, or use a mobile administration service (Meraki, Apple Configurator)

* End-user redeems the code, or passes them off to the final end user

* !!! End Users need to pay attention to what account is logged into in iTunes before redeeming codes!!!

Apple VPP: After Purchase of Apps

✳ Go to the iTunes Store, and click the 'Redeem' option. Enter the code, and the app is downloaded and will be installed the next time the device syncs.

✳ Or, you can use the clickable redemption links and avoid iTunes download and sync

✳ !!! Copies of apps should be purchased for every device, but only one code is redeemed, then synced to all devices. PF needs to mark the other un-redeemed codes as 'In Use' even though they have not been redeemed!!!

Still have questions?

- iOS 6 Deployment Guide (no iOS 7 version yet…): http://images.apple.com/education/docs/ios_6_education_deployment_guide.pdf

- Apple Education Seminars beyond VPP: http://edseminars.apple.com/ASVPP/ondemand

- Email vpp_edu@apple.com or call (800) 800-2775

Managing and Supporting iPads in the Classroom

**Clint Stephens
Southwest Educational
Development Center
clint@sedck12.org**

**Permalink: http://goo.gl/vv1UY
http://sedcclint.com - iPad or UCET tag**