Chapter Seven: Managing New Media for Youth Services

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As we examine the use of new media in library programs and services for young children, it is important to consider the practical aspects of acquiring, managing, and maintaining the technology involved in delivering these services. As with most technology projects, some thought, preparation, and planning at the outset can prevent many problems in the implementation process. Since new media technology is rapidly and continually changing, this chapter will give a survey of issues to consider and some resources to help in the decision-making process rather than specific recommendations. The chapter will conclude with case studies of two libraries' experiences with managing their new media devices intended for use with young children.

Technology Planning

Begin by looking at early literacy and new media technology as part of the larger technology picture for your library. For many youth services staff, technology management is not a primary job responsibility; however, when integrating tablets or other devices into literacy programs, youth services staff may find themselves taking on an integral role in the setup process, or at the very least working more closely with IT staff. Being able to consider the needs of the technology implementation project within the larger framework of the organization goes a long way toward gaining the trust and cooperation of those who will be helping set up device management solutions, and it makes for a more effective working relationship going forward. Make sure to consult with key technology staff at the library at the outset of any project to add new media technology into services and spaces for young children.

Does your library or organization have a technology plan in place? If your library uses E-Rate discounts, you probably do. Getting an overview of any plans that are already in place will give you useful information (and ammunition) as you make requests to the technology gate-keepers in your organization. An overview of these existing plans can also allow you to make sure that your project priorities and strategies are aligned with the larger organization. An up-to-date technology plan can also be an excellent resource in support of a grant application if you will be seeking grant funding for new media technology.

If your organization does not have a technology plan in place, there are resources available to help you start, including from TechSoup for Libraries and Universal Service Administrative Company (see full resources list at the

end of this chapter). Even if you are unable to undertake development of a full technology plan, it is wise to consider some larger questions before jumping into an implementation of digital technology for early literacy.

Intended Use Considerations

Think about short- and long-term goals for your new media implementation. How will devices be used, and by whom? A pilot project seem like a good way to start small; it may be more manageable to start with and make it easier to get buy-in. At the same time, however, you need to think through your ultimate goals and where you want to end up before designing a smaller-scale pilot; this forethought can better ensure a smooth transition as you scale a pilot project into a more comprehensive implementation. For example, if you start with one or two tablets in the library but know you eventually want to have 15, make sure you work toward a management plan that will accommodate the larger number of devices. It is not necessary to have everything in place at the outset, but you also do not want to have to create a new system for device management every time your inventory changes.

Will you have devices for use by the public, or by staff only? Will the devices be used exclusively in supervised programs, or will patrons be able to check them out? If patrons can check them out, are they for use in-house only, or can they be taken out of the library? All of these decisions have ramifications in terms of how you deploy a technology implementation in the library, and all should factor into considerations of intended use.

Budget Considerations

Deciding on the types of devices to purchase is a balancing act of budget, features, intended use, content, and considerations specific to individual libraries. In the libraries interviewed for this chapter, devices running iOS (i.e., Apple devices) are the most common, followed by Android devices. In terms of cost comparison, Android devices can be purchased more inexpensively than iOS devices, allowing an organization to provide more devices for their budget. The Android app market has surpassed the iOS market in terms of worldwide downloads, although iOS app sales revenue is still significantly higher (Ranger, 2015). Additionally, criticisms of Android app quality as compared to iOS apps still remain. If availability of high-quality apps is a deciding factor in whether to purchase iOS or Android devices, professional app reviews are a good tool in finding quality content for any platform you may choose.

In purchasing devices, make sure to consider repair and replacement costs as well as initial purchase. Beware of making selection by budget alone—perform hands-on testing of any models you are considering for purchase. Ultra-low-budget Android models can sometimes be purchased for well under $100, but these models often have inferior touch screens which make them difficult to use, especially with children.

It is also important to consider accessories and peripherals when thinking about device cost. For circulating devices, sturdy cases are a must. Do you want to have devices available for hands-on use in the

children's room without checking them out? A locking case with a wall mount or stand may be a good option. The larger your device collection, the more likely you will want some sort of charging tray or cart to store and recharge devices in the most space efficient manner. If you want to use a device in story time or outreach, you may want to purchase a dongle for connecting to a projector. These relatively small accessories costs can add up quickly, so give plenty of thought to how the devices will be used and plan accordingly.

Security and Access Issues

If your library uses E-Rate, or if your organization's policies require it, you must ensure that devices used by children are in compliance with the Children's Internet Protection Act (CIPA), which means filtered Internet access. There are multiple options available for providing filtered internet on new media devices. Apps such as NetNanny, Mobicip, and others offer a variety of controls for filtering and content monitoring and are available for both iOS and Android. For example, in iOS you can disable the Safari browser and install a filtered browser to use instead.

Another option to limit access to apps or settings on the device is to use a "kiosk" app or the "Guided Access" feature on iOS. This strategy allows the administrator to restrict access on a device to a single app and prevents the user from exiting it. This setup can be a very useful option in a children's library setting—a device can be secured in a locked case, for example, and can be set to display an "app of the day" in kiosk mode. Staff can attend to regular business without needing to closely monitor the device to prevent children from accessing device settings or other content.

Device and Content Management

One challenge of deploying tablet technology for library use is that tablet devices were originally designed for a single user. As the tablet market has grown, changes have been made to the operating systems and enterprise solutions have become available which address some of these challenges, but the best deployment option for your library still requires planning and thought.

For managing a small number of devices, using one account with iTunes or Google Play to sync content between devices may be a viable option; this method is used by many libraries, especially in the early stages of new media deployment. Depending on the type of content (e.g., app, ebook, music, etc.), you may be able to load one purchased copy onto 5, 10, or unlimited devices. Apple offers a Volume Purchase Program that allows bulk purchase of content like apps, and some discounts are available for purchase of more than 20 copies. Google Play does not currently offer a comparable program for business or government, although they do have a bulk purchase and management option for K-12 schools (Google Play for Education). For larger-scale device deployment, Apple offers a Device Enrollment program that can be connected to an organization's Mobile Device Management (MDM) solution. Alternatively, for Apple devices that will be used by multiple users (e.g.,

circulating iPads in a library), Apple recommends Apple Configurator for managing devices.

MDM solutions can simplify content and device management across a large number of devices and enable the creation of different profiles or user groups. These solutions can be very challenging to set up initially (at least one library has indicated they would forego using an MDM with their small number of devices were they to begin again), but they generally work well once fully deployed. There are several MDM options that are free (e.g., Configurator, or Cisco's Meraki—free up to 100 users); most can handle devices from multiple platforms. This option can be an excellent solution if you want to have multiple groups of devices. You can set up separate parameters for a staff group and a patron group, or you can create different patron groups by age. MDM solutions allow the administrator to distribute apps to multiple devices at once without having to handle each device individually.

If you plan to circulate devices, it is necessary to think about policies for loss or damage, who is allowed to check them out, etc. Due to the high cost of the devices themselves, some libraries are more restrictive in their lending policies; e.g., limiting circulation to inside the library building, or to adult patrons only. When circulating devices are returned, it is generally a good idea to restore them to a standard profile. This action can be done with an MDM solution or by manually restoring from a backup. This process should be standardized for any staff handling devices and kept as simple as possible. Since Android is an open-source platform, knowledgeable users can customize their own maintenance solutions, as done by the Valley Library at Oregon State University (Nichols, Hussong-Christian, & Ordway, 2014).

Regardless of which solution you choose for your library, it is imperative to have a plan to accommodate app and operating software updates as well as collection management. In talking to several libraries for the preparation of this chapter, it became clear that none had reached the point of having to think about weeding their app collections. However, some apps can use significant storage space, so it is entirely possible to reach a point where you can no longer keep all the apps you own on a given device. Decisions will have to be made about which apps will be loaded on each profile and how often those apps should be changed or rotated.

Most of the libraries consulted for this chapter were still developing their policies and procedures for new media collection development. Some libraries are using a formal rubric for app evaluation (see an example in Chapter 5 of this book), while others are simply applying collection development methods from traditional print and media collection development to new media offerings.

The mission and intended audience for a new media technology implementation also have significant influence on what devices and software will be acquired. At Mission Viejo Library, our iPad collection focuses on use in early literacy contexts, so we evaluated our app collection primarily around how well each app supports one or more of the five early literacy behaviors (talk, sing, read, write,

play). This early literacy aspect is how we share the technology with parents and caregivers.

Because there are many excellent free apps, and many paid apps are typically periodically offered at a discount or for free, it does not take a significant budget outlay to build a good collection of apps to use in library services. Still, it is important to consult review sources and try each app before making it available to patrons.

Legal Disclaimer

As you make decisions about implementing new media technology in your library, always consult the most recent terms of service/end user license agreements for the devices and platforms you are considering. Consult with the legal counsel for your organization to make sure that the library's use is not violating any terms.

Case Study 1: Darien Library (Darien, CT)

Darien Library was a front-runner in using new media for early literacy service at the library. In September of 2011, they launched a set of 6 circulating Early Literacy iPad kits. Today each kit includes:

- iPad 2 loaded with librarian-selected apps and ebooks, in a heavy-duty protective case
- charger
- handouts with information for parents:
  - list of apps on the iPad (also available at: http://www.darienlibrary.org/kids/apps-tech/5880)
  - app evaluation criteria for parents and caregivers
  - information on using technology with children
  - recommended resources and reading on digital literacy and child development
  - download instructions for free library ebooks
  - survey form
  - liability form (the caregiver fills this out when they check out the kit, accepting financial responsibility for replacement if they damage the iPad)

Apps on the iPads are organized into the five early literacy practices (talk, sing, read, write, play), with approximately 6-8 apps available for each practice.

In addition, Darien Library has mounted an iPad in a locking case on a shelf end-cap in the children's area for daily use by children in the library. They use the Guided Access feature on the iPad to limit access to one app at a time.

Darien did consider other tablets (although the market was much more limited at the time they launched their service), but they chose Apple iPads for several reasons: user experience; ease of use; and availability of quality content (the app market at the time was much stronger for iOS devices). Those considerations are still of top importance when they evaluate devices for future purchases.

Darien librarians reviewed many apps before selecting the ones to load on their circulating iPads. They approached this task much like the process of developing book lists, first developing desired criteria and then searching for apps that fit the profile. They looked for apps appropriate for ages 2 to 5, particularly

those that support pre-literacy skills such as letter knowledge, phonological awareness, and narrative skills. They also considered the design of the app, making sure each was aesthetically pleasing, functioned well, and was easy to use. The librarians used a shared Google document to record their evaluations, then pared down the list to make sure they had a diverse group of apps that supported a variety of skills and modes of play.

When a circulating iPad kit is returned to the library, staff wipe and restore it from an iCloud backup of the Early Literacy iPad profile. This process erases any patron information that was stored on the device and ensures that all of the library's apps are installed; the process takes about 3 minutes. The iPad is then charged and the next hold on the device is processed. By the time the next patron picks up the Early Literacy iPad kit, it is fully charged and ready to go.

Case Study 2: Newport Beach Public Library (Newport Beach, CA)

Newport Beach has 20 iPads which can be checked out for use inside the Central Library: 10 for adults and 10 for children. The loan period is two hours, and iPads can be renewed if there is at least one device still available. Patrons must have a valid library card and must leave their photo ID (e.g. drivers license, passport, or student ID) at the desk for the duration of the checkout period. Patrons are responsible for repair or replacement costs if the device is damaged.

The children's iPads are currently loaded with 34 apps, most of which are ebooks or apps focused on early literacy skills. However, Newport Beach iPads also circulate to older children and there are also some math, science, and history apps that support common school projects and early elementary curricula. App selection is handled primarily by one librarian but with some input from the other children's staff.

Newport Beach uses Apple Configurator to manage their devices in conjunction with two charging stations: one large charging/syncing cart in the adult area, and one smaller charging/syncing tray in the children's area. When iPads are returned, they are plugged into the cart or tray which is connected to Configurator. It restores the iPad to the appropriate profile settings (adult or juvenile) and charges it in preparation for the next checkout.

The IT staff at Newport Beach found Configurator challenging to set up initially. They also found that they were having frequent problems with iPads crashing during the update and restore process, and after extensive troubleshooting made two changes that resolved the bulk of the issues: 1) they disabled automatic updates, and 2) they switched to a wired configuration for the charge/sync trays that work with Configurator, rather than wireless. These changes greatly improved the reliability and functionality of the device management solution.

Newport's IT staff also evaluate each potential update to determine how valuable and/or necessary the potential changes might be. Rather than update the operating software every time an update is available, they follow user reports to anticipate potential problems

and weigh those against the features provided in the update to determine whether or not to implement. IT staff report that they are updating approximately every other time an update is available.

Resources for Further Reading

Technology Planning

- Introduction to the Technology Planning Process, from TechSoup for Libraries: https://www.techsoupforlibraries.org/cookbook-3/planning-and-decision-making/technology-planning-process
- Technology Planning, from Universal Service Administrative Company: http://www.usac.org/sl/applicants/step01/

Device and Content Management Decisions

- Apple Configurator: Transitioning to Apple Deployment Programs, from Apple: https://support.apple.com/en-us/HT202977
- Distribute Android apps in your organization, from Google Apps: https://support.google.com/a/answer/2494992?hl=en
- Google Play for Education access, from Google Apps: https://support.google.com/edu/play/answer/6056739?rd=1

Legal Considerations

- Apple iTunes terms and conditions: https://www.apple.com/legal/internet-services/itunes/us/terms.html
- Apple VPP Terms and Conditions: http://www.apple.com/legal/internet-services/itunes/volume/us/terms.html
- Children's Internet Protection Act, from the Federal Communications Comission: http://www.fcc.gov/guides/childrens-internet-protection-act
- Google Play Terms of Service: https://play.google.com/intl/en_en/about/play-terms.html

Sample Lending Policies

- Fort Worth Library Early Literacy iPad Loan Agreement, from Fort Worth Library: http://fortworthtexas.gov/library/info/default.aspx?id=101914
- Laptop/iPad Borrowing Policy, from Newport Beach Public Library: http://newportbeachlibrary.org/about/policy/laptopipadpolicy

General Device Guidelines for Libraries

- "iPads" in the Library Guidelines & Recommendations, from Mobilary: http://mobilary.wikispaces.com/ipadguidelines
- Lending iPads 101: Steps to Loan from Your Library, from Providence College: http://works.bepress.com/cgi/viewcontent.cgi?article=1027&context=julie_decesare

References

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Ranger, S. (2015). iOS versus Android. Apple App Store versus Google Play: Here comes the next battle in the app wars. *ZDNet*. Retrieved from http://www.zdnet.com/article/ios-versus-android-apple-app-store-versus-google-play-here-comes-the-next-battle-in-the-app-wars/.