

feature

Best Practices

Building Apps the Teen Way

By Linda W. Braun

Have you heard of Thomas Suarez? He's a sixth-grade, California-based app developer.

Thomas isn't the only young person making a mark as an app developer. Last year, fifteen-year-old Robert Nay made the news with his Angry Birds–toppling app, Bubble Ball. (Bubble Ball supplanted Angry Birds as the number-one app in the Apple App Store.) Librarians in particular liked the Nay story because he used his library to learn how to build the app.

Teens learning to code is not a new idea. Before the Web, libraries sponsored programming workshops using languages such as BASIC. I have been leading young adult Web development workshops in libraries for over a dozen years. But app development can vastly extend the boundaries of a teen's world, along with the teen's sense of achievement. Suarez and Nay both made national news headlines with their apps and have spoken in interviews about their newfound confidence related to their ability to go out and do great things.

Benefits to Teens

It's easy to see that learning how to code apps can help teens master a variety of the necessary developmental assets educators are regularly striving to help develop in young adults. For example:

Support

When teens have access to resources and programs that encourage an interest in app development, they are likely to feel supported by librarians. Because app development is fairly new, teens also feel supported in their interests related to current trends and topics.

Empowerment and Social Competencies

I learned about Thomas Suarez via a Twitter message that linked to a video of him presenting at TEDxManhattanBeach. (See the resources section for a link to the video.) Standing in front of a large crowd of adults, Suarez effortlessly and

confidently talks about his apps. When you watch the video, you can't help but see he is an empowered young man.

Constructive Use of Time and Commitment to Learning

Taking the time to learn how to code, troubleshooting the code, going through the process of having an app added to an app store—these activities give teens multiple opportunities to manage their time and learn and enhance skills.

Programs are already available to help schools and libraries integrate apps into teen learning. In January, Lenovo and National Academy announced the launch of a new Science Technology Education Mathematics (STEM) program for integrating app development into the curriculum.

At Grover Cleveland High School in Queens, New York (one of the schools awarded funding by Lenovo and National Academy), not only are teens learning how to develop apps, they are also gaining skills in business plan development. Because an app isn't meant to live just on one teen's personal device, success requires learning what it takes to get into vendor app stores and understanding how to manage the retail side of apps. Both present opportunities to learn about business and financial literacy.

Both Suarez and Nay have businesses associated with their apps. Not only did they have to learn about finance, they also had to learn about product design and customer appeal. For example, Suarez's app, Bustin Jieber, a Justin Bieber whack-a-mole game, is geared to the very specific audience of tweens, teens, and adults who would enjoy dissing Justin Bieber and his fans. In addition to visual appeal, Suarez had to think about what interface would be comfortable for members of his target market. Such a project expands critical thinking beyond

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what teens learn in writing and public speaking classes.

What Should Librarians Do?

Don't worry, you don't have to learn to code apps yourself. Once you identify the teens in your community interested in app development, there are some basic short- and long-term steps you can take.

First, Talk With Teens

Keep in mind you may have to go beyond the teens that you see every day in the library. They might be interested in app development, but, then again, maybe they aren't. That doesn't mean that there aren't teens in the community who want to learn about designing apps. Go into the schools and talk with teens there. Visit out-of-school-time programs and have conversations with teens in those. Be thoughtful. The best question to teens might not be, "Do you want to learn about designing apps?" Teens might not be able to answer that question. They might not think it's even possible to learn. But, if you ask something like, "Are you curious to find out how people make the apps you download?" or, "Do you wonder what it takes to get an app into the Apple apps store?" you're likely to discover some interest.

Beef Up Your Collection

This might include books on helpful programming languages. (Make sure the books are up to date.) It also means finding Web content that provides teens with information on what it takes to build an app. This content might include information about software programs to use, how to make an app that's user-friendly, how to design an app that is

Resources for Getting Started

14-Year Old's Bubble Ball App Knocks Angry Birds Out of Top Spot
http://www.huffingtonpost.com/2011/01/17/robert-nay-bubble-ball_n_810023.html

ABCs of Mobile App Development Taught at Queens High School
http://brooklyn.ny1.com/content/ny1_living/technology/155656/abcs-of-mobile-app-development-taught-at-queens-high-school

Absolutely Amazing 6th Grade iPhone App Developer Speaks at TEDx
<http://thenextweb.com/shareables/2011/11/09/absolutely-amazing-6th-grade-iphone-app-developer-speaks-at-tedx/>

Android The Developer's Guide
<http://developer.android.com/guide/index.html>

Carrot Corp
<http://www.carrotcorp.com/CarrotCorp/CarrotCorp.html>

iOS Developer Library
<https://developer.apple.com/library/ios/navigation/>

iTunes U
<http://www.apple.com/education/itunes-u/>

Nay Games
<http://www.naygames.com/>

Search Institute 40 Developmental Assets for Teens
<http://www.search-institute.org/content/40-developmental-assets-adolescents-ages-12-18>

appealing to a specific audience, and what the process is for getting into various vendor app stores. Consider exploring resources like iTunes U for up-to-date content in this area. For example, there is an iTunes U course from Stanford University on app development. While you might say, "Stanford, that's too much for the teens with whom I work," don't jump to conclusions. It's possible that motivated teens will find the Stanford material just right. Having high expectations of teens can spur them on to higher achievement and improve their sense of personal identity (an important developmental asset).

Take Some Time to Learn about Apps and How They Work

No, as I said previously, you don't need to learn how to code apps. But, if you are

going to help teens learn about app development, then it can be useful to have some knowledge about what apps are, how to download them on devices, the types of apps that are successful, what the pricing structure is for apps, and what makes a good app. You can probably learn much of this by talking with teens and trying out apps with them.

Know in Advance What Technology is Required for Developing Apps

Will the teens need access to a Mac, or will Windows suffice? Building apps for Apple and Android devices, each requires using a different software development kit (SDK). Apple and Android both provide a host of useful resources that take developers step by step through the development process. (See the resource list

for more information.) These provide insight into the technology and tools needed for teens to successfully build apps. Of course, teens will need access to devices to test their apps. If your library doesn't make devices available to the community, you can have teens use their own devices for testing, or ask colleagues for access to their devices.

Check Out What's Going on in Your Community

Maybe there is someone who lives in town who is an app developer or just someone who has the skills and is willing to share them. Maybe there is someone who has experience going through the process of getting an app into a vendor's

app store. Maybe there is someone who has experience with developing teen-friendly user interfaces. Of course, even if an expert isn't in your community, that doesn't mean there isn't one available to help the teens. If you know of someone across the country, there's always Skype or Google+ Hangouts as a way to bring that person in contact with the teens with whom you work.

Collaborate

Perhaps a teacher wants to integrate app building into her curriculum. That teacher might work with the public and school librarian to locate resources that support teen learning, such as experts. During

school hours, the school librarian would work with the teens and the teacher on skills related to the project. During out-of-school hours, public library staff can make resources available for the teens. At the end of the project, the school and public libraries can cosponsor a community event showcasing the apps the teens developed, and of course, making them available for download.

Planning programs and services for teens on the topic of app development might seem a little daunting at first. However, once you get started, I think you'll discover many sources of support and inspiration. Just take a few minutes to watch Thomas Suarez and to read about Robert Nay, and I think you'll have a big inspirational head start. YALS

The K-Pop Wave Hits Libraries! (continued from page 13)

and they played "Name That K-Pop Tune." As a teen librarian, I strive to provide the most up-to-date resources for their needs.

Conclusion

The next step for me as a teen librarian is to continue monitoring and tracking the movement of the K-pop culture. I will be presenting a K-pop 101 at an

upcoming LAPL teen librarians' information meeting. It is very likely we will make K-pop a permanent part of the programming at the Los Angeles Public Library.

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