Library Hi Tech News

Current CITE-ings from the popular and trade computing literature

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This column plays catch up with important articles from this past year with interest and implications for librarians.

Streaming and transforming media

Beyond Netflix and Hulu, this article shows you how to put your videos onto a DVD. Highlighted is the DVD Flick app, CDBurnerXP. For streaming media on your network, use MakeMKVwhich has a simple interface. To convert movies for your smartphone or tablet, use Handbrake that works with MakeMKV. You can also make your own audio books with the Libtwolame audio encoder that allows one to control quality and stereo modes. Archive your CD collection before CDs become things of the past; any device using Calibre software is already in use by many libraries. All of these products are free (Maximum PC Staff and David Murphey, 2014).

Smartphone journalism

So many smartphone apps, such as Twitter, provide up-to-the-minute world news. In general, social media has many advantages over search engines which due to search engine optimization often have ad-rich content that shows up first. This is definitely important information for librarians helping users find current news information (Rose, 2014).

Creativity

Various smartphone apps can be used for idea creation, such as looking at Instagram, getting feedback on ideas from Twitter or even quick checks on email. By having a handheld device, ideas can be formulated and shared at the press of a button and an easy to use app. This article ends with the quote, "Our phones are indelibly bound with our aesthetic souls. And today both are always on" (Carps, 2014). Another article in the same issue focuses on how Pinterest can focus creativity and mentions that Mia Blume, Pinterest's product design manager, notes how the product's image streams can create inspiration snacking. The product's guided search steers pinners toward what they are looking for and leads one to a trail of pins, each of which can spark ideas. Looking back at one's digital pin curated collection can also generate new ways of thinking out of the box (Fortini, 2014).

Make

The *Make* journal is a critical source of information for librarians maintaining makerspaces as to new products that could be added to their collection. Here mentioned is information on some of the articles I found most interesting. One short article talks about how much we can learn from the Montessori education movement and how this sparked the creation of the Makey Makey project. Makey Makey changes a computer interface to anything one wants and allows one to interact with computers in new ways (Dougherty, 2014). The Brainwriter uses Tobii eye tracking technology combined with OpenBCI Electroencephalography (EEG) devices for players to shoot laser beams at virtual robots using only eye movements and brainwaves. BCI technology is expanding at a rapid pace to allow for increased brain–body applications. Besides gaming, just think about how this technology might be used with physically and mentally challenged library users (Russomanno, 2014). Finally, of interest to librarians and hobbyists is how a DIY Book Scanner can be built for between $500 and $1000 using the credit card–sized computer, the Raspberry Pi, point and shoot cameras and skate bearings. The Raspberry Pi runs the software, spreads to send zipped photo images to a computer and has a Web interface to control the scanning from a smartphone or tablet. (Reez, 2014).

Smartphone holograms

In one or two years, it is expected that the companies, Ostend Technologies and Leica, will be able to display holograms on your phone. Light-field displays emit three-dimensional (3D) images – imagine the entertainment, science and maybe even library applications, such as data visualization. (Lewin, 2014).

Android and Chrome

Those with only an iPhone and a Mac or PC are probably not familiar with the increasingly huge base of users with Android smartphones and tablets and inexpensive computers (Chromebooks) that run Google's Chrome as their operating system. Chromebooks have found their ways into libraries due to their low cost and the low threats of malware and other viruses. In this article's comparison, it found that Chrome is the greatest threat to Microsoft Windows because it is so simple to use and beats Android on price, security and as noted, usability (Mah Ung, 2014).

Higher education's digital future

Academia must be sure to not miss major opportunities in a fast-moving digital environment. The author offers three possible scenarios for 2024 (how one can plan that far in advance is a mystery to me). The Two Cultures scenario provides clear distinctions and gaps between the sciences and the humanities. Also, at polar opposites are brick and mortar buildings versus building better digital infrastructures that offer increased opportunities for

digital. Still there are important intersects – spaces for high-end equipment, now 3D printers and in the future, four-dimensional (4D) printers as well as blended learning and flipped classrooms. The next scenario, Renaissance, focuses on a recreation of human creativity and imagination empowered by new digital tools, increased social networks and smart devices. The last scenario, Health Care Nation, envisions health care generating 40 per cent of the US gross national product. With this scenario comes increased attention to medical education of increasing needs for professionals in the marketplace; it is also reflective of a population that continues to live longer. The author suggests using these scenarios as beginning aids to support imagination and planning and, of course, use social media's opportunities of collective intelligence, pooling all of our intellectual resources together (Alexander, 2014).

Engagement

User and community engagement have always been important areas for libraries. Physical spaces (such as libraries) are designed as welcoming places for students, invite interaction and support scholarship and research. The digital environment needs to provide the same options and, in many cases, can go much further in meeting these same kinds of engagement experiences. The digital landscape provides more learning experiences and opportunities to connect learners, scholars and researchers as well as bring together the institution with local communities, industries and even help meet global challenges. Mobile devices can be used as tools for complex problem-solving, customization and use the capabilities of clouds and crowds. Gaming, simulations and live along with virtual communities promote engaged learning (Oblinger, 2014).

Mobile education

Well beyond the classroom, an expanding number of options is available for learning for free right on your smartphone or tablet. Specific examples are given for foreign languages, computer programming, speed reading (we all need that), cooking and music. Some specific resources include iTunes U, Udemy, Coursera, Khan Academy and Udacity that includes many MOOCS (massive open online courses) (Nikolasien, 2014).

Blogs

Many libraries use blogs as forms of outreach and information. This brief article reviews the major blogging software services available: WordPress, OverBlog, Blogger and Weebly. There is an increased interest in blogs due to mobile devices (Shou, 2015).

Robots in education

It seems that in 2014, the Merryland International School in Abu Dhabi launched a robotics lab with thirty robots that assist in instruction, including a robot dog that sleeps if students are not paying attention. Most doubt that robots will replace professors (or librarians) but may be useful in teaching particular processes, such as in art or physical education (Hennick, 2015).

Blended learning

Hybrid courses that include both one and face-to-face interactions are creating new opportunities for educators and students. To support these new courses, it is important to invest in network infrastructure up-front, do not let educators disenfranchise by making them responsible for technology issues and focus on learning goals no matter what format. This article notes cost savings can be had by using the same devices for each student. However, the trend and reality is BYOD education (bring your own device) and using programs that interoperable no matter what the device. This has major implications for libraries with information literacy. It is not the device that matters; it is how to interact with information (Bengfort, 2015).

Credit card computers

A new tiny chip computer priced at only $9 is challenging the Raspberry Pi at $20, a staple of many library makerspaces. Next Thing has developed this new CHIP computer that is ARM-based with a 1 GHZ processor, 512 mb of memory and 4 GB of storage. The CHIP runs Linux and can surf the net using Google Chrome, use word processing and spreadsheets with LibreOffice and even play video files using the LC Media Player. CHIP also has WiFi and Bluetooth connectivity built in as well as is preloaded with many applications and the ability to run thousands more free open-source apps. For programming, CHIP comes with SCRATCH, a development language useful in teaching computer technology. CHIP can be housed in a 4.3 touch-screen, incorporate a QWERTY keyboard and has battery power that can last for 5 hours. And, the actual CHIP can be removed and placed in one's pocket. All I can say is WOW and what a boon to global computing for everyone (Burt, 2015).

Engagement

Through IT, universities such as Duke can improve engagement with sports fans. We all lament how much is spent on athletics versus academics in higher education. But, this piece demonstrates how an effective technology-based engagement program can capitalize on athletics and the number of individuals interested in university athletic programs and events. Duke has created a new mobile calendar app, e-Cal that connects retail, ticket and television products (and how about libraries?) to alumni and fans. Users can also post notes to Facebook, Twitter, or Google+ (Peimesberger, 2015).

Raspberry Pi

As already noted, this credit card–sized computer is a mainstay of library makerspaces as a major educational programming tool. The Raspberry Pi was designed by a non-profit UK-based foundation at a cost of under $25. Several operating systems are made available, named Pidora, Raspbian and XBMC, and the PI runs under Linux too. This article provides step-by-step directions for installing software, tuning the PI into a media center, including turning your TV into a smart TV and its use as a gaming console. And with a huge community of users,

lots of help is available as well as more useful applications (Pounder, 2014).

Personalization

One of the major problems with libraries is the philosophy of one size fits all; one Web site is used to organize and access information. This article focuses instead on how to alter a Website's content to the preferences of the user. How? Well one major option is data and that is a sticky wicket when it comes to privacy (unless opt-in capabilities are possible), allowing users to share their information from various social networks and the ability to provide recommendations, such as what Amazon does: others that liked this, also liked [. . .] But, personalization can also be improved by enhancing the user experience such as content visualization that one can control and provide interactivity. In these cases, user privacy need not be an issue. Personalization can be an important way to provide user engagement (Howen and Schou, 2015).

Windows 10

Windows 9 is not even out, and this article discusses Microsoft's plans to roll out many different versions of Windows 10. There will be a home version, one for tablets and also for convertible devices. All versions will include the voice-enabled Cortana digital assistant, the new Edge Web browser and face-recognition technology. There will be bundled apps of Photos, Maps, Mail, Calendar, Music and Video. X-Box gams will be supported. Windows 10 Mobile will enable some devices to use Continuum that will allow users to use their phones like a PC when connected to a large display. Finally, Windows 10 Education will provide interactivity with compact computers, such as the Raspberry Pi2 (Hernandez, 2015).

Travel

Need some R and R and how about your users? This article reviews 18 different apps to plan your next trip. Many of these are well-known staples, such as Kayak, Expedia, Travelocity, Hotwire, Trip Advisor and Cheap Tickets. But many others are noted that I was unaware of: Hopper that also tells you best times to book flights and cheapest days to travel, GateGuru for airport information and real-time flight updates and Hotstop for help when you stuck in an unfamiliar city (Ludlum, 2015). The next article reviews apps for navigating rush hour and other car travel and includes Apple Maps, Google Maps (the Editor's choice), Waze that uses crowdsourcing information for traffic jams, Sygic, Scout, Navimi GPS and Mapquest. All products use your phone's location data (Karpen, 2015). Many will find the vacation guide on family trips useful. Many of the apps described are Spotify for offline listening of music, Urbanspoon for restaurant reviews, RoadTrippers to find popular attractions and points of interest (many natural environments and nature trails) and GasBuddy to compare the prices of the closest gas stations (Dufoe, 2015).

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