Learning beyond the classroom: Connected education through Tech

By Usama Nouri

Encouraging my six-year-old daughter to choose traditional entertainment over my smartphone is an ongoing battle. She was born into a world in which technology is a ubiquitous component of our lives. Schools are succumbing to the push to include technology in the classroom, and in particular Bring Your Own Device (BYOD) schemes are becoming more common. This is happening, but it doesn't mean that it doesn't create a whole new set of challenges for educational administrators to overcome if they are to take full advantage of the technology revolution.

According to a survey conducted in April 2015 by the University Of Phoenix College Of Education, 93 percent of teachers believe that personal devices connect students to real-world learning. There is no doubt that connected devices enable students to explore a much wider world, and much more instantly, than we ever could in our school days; there is considerably more interaction and richer content to be had through the Internet than through a traditional text book. In fact, having a device such as a tablet eliminates the need for text books entirely. Students of the not-so-distant future will likely not know what it's like to carry a backpack laden down with heavy books. There'll be no more excuses of forgotten textbooks, no more marginalia, and no more need to highlight real books, as everything will be carried around in one convenient, portable digital form.

This is just scratching the surface of the benefits of technology in classrooms. Despite the unquestionable boons, though, it is expensive for educators to provide every teacher and student with a tablet of their own. Therefore, BYOD schemes are the way to go, with the costs of technology investments and maintenance placed on the students, or their parents rather! However, despite the financial advantages that BYOD offers, school administrators face another set of challenges that could far outweigh the savings that come from the scheme. Here's a look at the top six challenges that will make educators think twice before incorporating BYOD into their education system:

1. Network Burden

Students will bring their laptops, smartphones, tablets, game consoles, smart wearables, e-readers, video and smart cameras, MP3 players and more wirelessly connected devices to school. Now, imagine the unprecedented burden this will place on the wireless network. A study conducted by Sophos revealed that on average a person carries 2.9 devices, and research by GfK predicts this number will reach 5.2 by 2017! Designing wireless infrastructure has never been more challenging and school CIOs must take this activity seriously.

2. BYOD = BYSND

The natural reaction of a CIO could be that by allowing network access to uncontrolled devices operated by teenagers is not BYOD - it's Bring Your School Network Down by inviting security breaches. Protecting the school network, IT applications, and the privacy of both staff and students is the highest concern. Security issues, whether deliberate through hacking attempts or unintentional through malwares and viruses, can cause damage to the learning process and can be financially compromising, too. A proper identity management system and AAA (Authentication, Authorization and Accounting) alongside associated processes must be in place and built into the BYOD strategy to mitigate this security challenge. Additionally, security measures must be built into the infrastructure equipment itself, not just the firewalls. A bonus outcome from applying such controls is the ability to monitor and restrict access to certain online resources, in keeping with the education context.

3. IT service desk's nightmare

With thousands of students come tens of thousands of devices, and all of their problems come along with them, including a disparate blend of hardware, operating systems, and applications. Imagine a day in the life of a helpdesk engineer, running between classes struggling to resolve incompatibilities with school networks and applications. This not only wastes precious class time, but also causes inconveniences for the teachers and students, disconnecting them from the learning activities. The education CIO must ensure that all infrastructure and school applications are built based on open standards, and also consistently keep an eye on the current and future trends in technology adoptions in order to adapt the school's technologies accordingly.

4. The Starvation Theory

When things are not controlled in a school environment, the law of the jungle prevails. BYOD entitles sharing of school resources between legitimate usage patterns and non-education related activities. Imagine a teacher trying to play a YouTube video during a class, only to be faced with the endless spinning pinwheel, while students' devices hog the entire bandwidth downloading hefty OS updates. Quality of Service controls must be applied to allow differentiated access and eliminate the perpetual denial of necessary resources. School CIOs should insure these features are available

in the infrastructure, that they are well-suited to the multi-tenancy school environment, and that configurations are current and up-to-date at all times.

5. Non-monetized investments

For the education sector, it is unethical to monetize services accessed by students, and most school fees are regulated even in the private education sector. Technology investments did not exist a few years back at this scale, and their introduction now affects the CFO's P&L dramatically. Capital expenditure can be transferred into assets, but the bigger issue lies in the running cost for licenses, support, and talented IT operations staff. The school administration must analyse the return on investment differently, with the focus on the school reputation and academic values, rather than pure corporate financial analysis. Efficiencies in the IT systems of choice and their operations must be the key evaluation factor for the CIO when making decisions on certain technologies. Sponsored and managed outsourced IT services could be an option that might appeal to some schools, but care must be taken as the privacy of the school and its students must be managed well in this case.

6. Imbalanced equality

An unavoidable, and rather less technical challenge of adopting a BYOD strategy in the school system is the potential issue of learning equality. A fundamental principle in the education system is making learning opportunities available equitably to all learners. If BYOD strategies are not monitored closely, the less fortunate students will not have access to the same learning resources as the fortunate ones. The school administration must always have the facility of providing school-owned devices for students to use in class and at home. This should either be considered as part of the school's social responsibility, or via a subsidy system that can be paid throughout the academic year. It all starts with a solid and well-conceived School Digital Strategy, which includes BYOD policies and tactics and so much more. A partnership with a technology provider, who can be considered a trusted advisor, is the strongest first step that school administration can take. This will nurture the learning experience, and guarantee efficient current and future school readiness.

When children are so accustomed to the gratifications of using technology, it's no surprise that my daughter considers colored pencils and paper to be 'boring' in comparison to the practically limitless possibilities a smartphone can offer. Schools and parents alike should prepare for the inevitable growth in devices that will shape every aspect of our lives from the classroom to the home to the office, by ensuring they optimize networks and apply the necessary security precautions that are needed for our constantly connected life.

Twitter plans layoffs next week — Re/code

SAN FRANCISCO: Twitter Inc is planning company-wide layoffs next week, technology news website Re/code reported on Friday, citing sources. The news comes after Jack Dorsey was appointed permanent chief executive on Monday. It is unclear how many of Twitter's staff will be laid off, but it is likely it will affect most departments, Re/code said, citing company insiders. (http://on.recode.net/1OqNsev)

The company employs about 4,100 people in more than 35 offices around the world, according to its website. Twitter shares fell 3.1 percent to $29.90 in extended trading on Friday.

The company is working to rekindle growth after its latest quarterly results in July revealed the slowest rise in monthly average users since it went public in 2013 - a performance that Dorsey at the time called "unacceptable." Twitter's layoffs come at the same time as it restructures its engineering organization to make it more efficient, Re/code reported. It is likely that many of the people impacted by the layoffs will be engineers, the report said. "We're not commenting on rumor and speculation," a Twitter spokeswoman told Reuters. Up to Friday's close, Twitter's shares had fallen about 14 percent this year. — Reuters

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Greek town glimpses transit future: Driverless buses

TRIKALA: There'll be no arguing with the driver on this bus: the rides are free and there's no driver anyway. Trikala, a rural town in northern Greece, has been chosen to test a driverless bus in real traffic conditions for the first time, part of a European project to revolutionize mass transport and wean its cities off oil dependency over the next 30 years.

Trials of the French-built CityMobil2 buses started last week and will last through late February.

Over the past year, CityMobil2 has been tried out near its base in La Rochelle in western France, on a campus in Lausanne, Switzerland, and near Helsinki, Finland, all in controlled conditions that produced no accidents. But in Greece, a country of narrow, winding, hilly streets, stray dogs, bicycle riders and impatient drivers, the buses are up against real traffic. The Greek government had to amend its laws to allow the testing and the city had to build a dedicated bus lane that deprived residents of downtown parking spaces. The robot buses don't look like science fiction vehicles - more like golf cart meets ice-cream truck. Still, heads turn as the skinny, battery-powered buses hum through the streets. They seat only 10 people and are guided by GPS and supplementary sensors, including lasers and cameras, that send live data to a control center.

The buses go no faster than 20 kph (12 1/2 mph), but the trials in Trikala (pronounced TREE-kah-lah) potentially represent a major advance for automated transport.

"There were cities bidding for this project all over Europe. They offered relatively restricted urban areas. But we said we could make it happen in a downtown environment and we won," said Odisseas Raptis, who heads the city's digital project department, e-Trikala. "We have a 2.4-kilometer (1.5-mile) route, the bus route. It's mixed with traffic, with pedestrians, with bicycles, with cars ... That hasn't been done before."
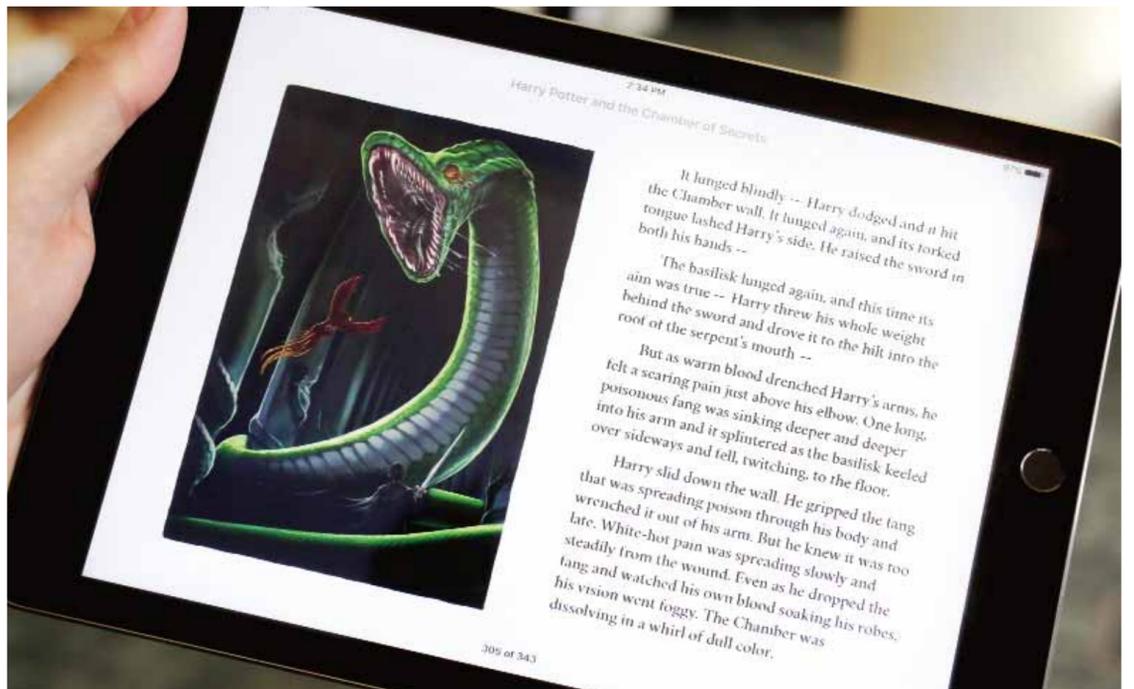
Vasilis Karavidas, chief technician for the project in Greece, trained with Robosoft, the company that developed the bus, in the southwest French town of Bidart.

Although the driverless buses are fully automated with onboard navigation and obstacle detection systems, each vehicle will be monitored by a driver in the control center who can override the system, Karavidas said. "It's as if they are in here and they can stop the bus if they want to, if something goes wrong," he said.

The buses are currently running without passengers, with full testing to start later this month when a fiber-optic network allowing faster data transmission is completed. Six battery-powered vehicles will eventually be used in this farming town of 80,000 that has become hooked on high-tech. Trikala already has already tested EU-funded pilot medical programs, including schemes to relay heart test data from home to the doctor's office and use tracker devices for Alzheimer patients. In the center of the city, a "digital tree" with solar panels allows benches to carry phone-charging outlets.

The 28-nation European Union is targeting gasoline use for city transport as one area where it wants to reduce carbon emissions. With oil prices and city populations expected to rise in the coming decades, a major shift to battery power and more shared transport could blur the line between private and public vehicles. Senior transport analyst Philippe Crist at the International Transport Forum, an OECD think-tank based in Paris, says transport trends are hard to predict as the world moves more toward automation. "We too often look at technological changes in isolation," said Crist. "There is a good chance that these technologies will create entirely new uses that we can only poorly grasp today. The reality is that everything is changing around these technologies and it is plausible that society may lose interest in owning cars or using fixed-service public transport - especially if these technologies allow better alternatives to emerge." — AP

GREECE: In this photo a worker checks a video on a screen of the tiny CityMobil2, driverless bus from the control center in town of Trikala. — AP

NEW YORK: Text and an illustration from "Harry Potter and the Chamber of Secrets" are displayed on an iPad in New York. The JK Rowling books are being released with animated or interactive illustrations, but only through Apple's iBooks Store and require the use of an Apple mobile device or a Mac computer. —AP

'Harry Potter' e-books come to life in new Apple edition

NEW YORK: You don't need to be a wizard to see the "Harry Potter" books come to life. The seven books are getting a makeover with more than 200 new illustrations in enhanced e-books made for Apple devices. More than half of the illustrations are animated or interactive, with such touches as a golden snitch from Quidditch matches flying away as you tap it on the screen. Series creator J.K. Rowling also goes deeper into some of the characters and story lines with a handful of pop-up annotations. The editions, released Thursday, are exclusive to Apple's iBooks Store and require an Apple Inc. mobile device or a Mac computer to read. For other devices, including Amazon's Kindle, standard electronic editions are available through Rowling's Pottermore site.

The makeover offers readers young and old a new way to engage with the story. It also gives Rowling and her publishers an opportunity to resell these best-selling books, the last of which came out eight years ago. It's akin to Hollywood releasing the same movies in new formats and with bonus materials.

While the illustrations are new and exclusive to the enhanced editions, Rowling's annotations aren't necessarily so. Rowling has been regularly posting new essays on Pottermore. She has traced Harry's roots to a 12th-century wizard and has written about the origins of an invisibility cloak that appears throughout the series. Rowling has also penned supplemental books, including "The Tales of Beedle the Bard," a children's book that was referenced in the last "Harry Potter" book.

Until recently, the Pottermore site also had a game that took readers through the books chapter by chapter, with riddles and other discoveries along the way. That game incorporated clips from the "Harry Potter" movies. The new e-books do not. Instead, the new editions offer full-color illustrations and animation from Pottermore artists.

In one animation, you see multiple letters fly in through the fireplace with news of Harry's acceptance to Hogwarts wizardry school. In another, an owl, a cat and the fog come to life on Platform 9 3/4, where a Hogwarts-bound train awaits. On the train, you see landscape moving by through a window.

In one scene of a feast, you can slide left and right to see the rest of a long table covered with food. It's not obvious which illustrations are interactive. The idea is to get readers to explore.

There's no sound, though. When Harry's friend, Ron, gets an angry audio letter from his mother, you see steam coming out, but you don't hear her screaming, as you do in the movie.

You can access Rowling's supplemental materials by tapping a quill icon embedded in the text. For instance, you learn how students arrived at Hogwarts before train service began: Some rode on broomsticks, but that was tough with trunks and pets to bring along.

There aren't many annotations, though. You get more backstory at the Pottermore site, but you need the e-books for the full text. — AP

Netflix raising US price for most popular video plan

SAN FRANCISCO: Netflix is raising the price of its Internet video service by $1 for new customers in the US, Canada and some Latin America countries to help cover its escalating costs for shows such as "House of Cards" and other original programming.

The new price of $10 per month for Netflix's standard plan - its most popular - marks the second time in 17 months that Los Gatos, California, company has boosted its U.S. rates by $1. The trend reflects the financial pressure that Netflix is facing as it competes against Amazon.com, HBO and other services for the rights to TV series and movies that will expand its audience.

Netflix's 42 million existing U.S. subscribers are being insulated from the price bump. That's a move CEO Reed Hastings is taking in an effort to avoid a repeat of the customer backlash that stung the company four years ago when it raised rates by as much as 60 percent for subscribers who wanted Internet video and DVD-by-mail rentals. The abrupt price increase in 2011 triggered an exodus that cost Netflix more than 800,000 subscribers and caused its stock to lose 80 percent of its value in a tumultuous 13-month period.

The experience taught Netflix to reward its existing subscribers as higher prices are phased in on new customers. Subscribers who have been with Netflix since May 2014 will still pay $8 per month under a two-year rate freeze adopted when the company last raised its US prices by $1. Customers who signed up since the last price increase will pay $9 per month until October 2016.

Netflix's audience continued to expand after last year's price increase, a pattern that investors appear confident that will be occur again with the latest uptick in rates. Netflix's stock surged $6.83, or 6.8 percent, to $114.93 Thursday. Wall Street has been hoping Netflix would increase its prices because its profit margins have been shrinking as the company's expenses climb for programming and an aggressive international expansion. Netflix Inc's programming costs are expected to rise from $3 billion this year to $5 billion next year. The research firm Ampere Analysis predicts Netflix will be paying $6 billion annually for its line-up by 2018.

Some of that money is being spent on previously released TV series and movies, but Netflix is pouring more money for shows that can only be found on its service - a formula that has been highly successful for HBO's pay-TV channel. The strategy has paid off for Netflix too as its U.S. customer base has swelled by about 70 percent from 25 million subscribers since the 2013 debut of "House of Cards," the service's first major splash in original programming. Netflix now features dozens of exclusive programs.

Netflix's higher price might help Amazon's rival Internet video service, which is sold with a bundle of other features that includes free shipping from Amazon's online store for $99 annually, or $8.25 per month. Some analysts, though, view Netflix's biggest competition as HBO, which sells an Internet-only version of its channel for $15 per month. HBO's price may give Netflix leeway to raise its prices even further, according to Per Sjofors, CEO of consulting firm Atenga. His analysis of customer sentiment concluded Netflix could charge as much as $13 per month for its standard Internet plan without hurting its growth.

Netflix's standard plan allows subscribers to stream video on as many as two different devices simultaneously and watch programs in high definition. A basic plan available to new customers for $8 per month limits watching to just one screen, with no high-definition option. — AP