

Future Trends: Connected Toys

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Future Trends Scenario: Connected Toys

“DONE!” yells Xeo excitedly as he slams his TestNav Pad 3000 closed. That history test was impossible! Who could even keep track of all the pandemics of 2018-2030?? What a pile of useless details, Xeo thought. The testing drone at the front of the room scanned a red light across Xeo’s work pod, reminding him that his voice level had activated “noise pollution” levels and he needed to quiet down immediately. Xeo rolled his eyes as he made his way to the front of the workroom complex. Now that his online assignments had been completed, Xeo was anxious to sign out and head to his favorite space: the school library. Quickly scanning his fingertips across the biometric device at the front of the room, Xeo’s exit was digitally recorded in his school data. The door remained stubbornly closed until Xeo tapped the “library” icon on the screen. A humanoid voice politely spoke through a small microphone and reminded Xeo that he had four minutes to make it to his destination and to, of course, have a great day.

As Xeo rushes up the stairs to the King George Media Center, he notices that it was busy, as usual. The library was already bustling with activity as Xeo tapped his fingertips across the biometric scanner and waited for the automatic doors to open. What a difference from the silent work pods where Xeo spent most of his time working independently on virtual assignments! Xeo slid to the left as a camera drone flown by a group of sixth graders wobbled unsteadily past his head. The librarian glances up as Xeo approached the circulation desk. A pair of boys running past call out a warning as their UBTECH Alpha 1 robot races across the floor and crashes into a sensory deprivation pod in the Black Out Relaxation area. Shrugging his shoulders, Xeo asks

the librarian, “So... which toys do you have left?” The librarian quickly scans under the desk and offers up a Cubetto coding toy, then a set of AR goggles, but Xeo shakes his head, feeling discouraged. The librarian glances side to side and quietly whispers to Xeo, “How about a blast from the past?”

Xeo curiously follows her to the workroom behind the desk. The librarian reaches into a storage cabinet and pulls out a fluffy panda toy. “Ummm... a stuffed animal?” Xeo asks politely. The librarian clicks a button on the bottom of the panda and says “Not just any stuffed animal, Xeo! A Cloud Pet from 2018! Listen to what kids were recording on these vintage toys! It’s amazing!”

Intrigued, Xeo taps the Play button on the panda’s tummy and hears some static. A child’s voice giggles, then whispers “Is this thing on? Oh my gosh, Panda, you would not believe what happened today. We got sent home for two weeks because of some virus from China. Two weeks of no school! I can’t believe it! Oh my gosh, Panda....”.

Annotated Bibliography

Longmeier, M (2021, December). Hackathons and libraries: The evolving landscape

2014-2020. *Information Technology & Libraries*, 40(4), 1-19.

<http://proxy.lib.odu.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=llf&AN=154213556&scope=site>

This peer-reviewed article provides insight into a little-known community event known as a hackathon. As a community space, libraries have the benefit of supporting informal and formal learning, having many multi-use spaces and being a hub for community activities. Hackathons are “time-bound events where participants gather to build technology projects, learn from each other and experts, and create innovative solutions that are often judged for prizes” (p. 1). Libraries have long been naturally aligned with both teaching and learning, and being part of a hackathon event allows libraries to provide a physical space for learning and assist in the education of participants. Libraries are a natural choice for hosting these events as they often have a large space and are available for free. College and university libraries are frequently used for hacking events, but public libraries and other school libraries are popular choices as well. As libraries have evolved into new roles that embrace technology and data, hackathons have become a creative avenue for them, along with makerspaces. There are many different versions of these events that can be hosted or planned by a library beyond a hackathon, including idea fests, coding jams, edit-a-thons, datathons, and makeathons (p. 3). This article describes libraries as the ideal setting for these events because of “ample parking,

ubiquitous Wi-fi, adequate outlets, and at times already 24-hour spaces built into their infrastructure” (p. 4). Hackathons have been known to tackle a wide variety of challenges, such as social issues, data literacy, building relationships with local government, and teaching basic coding skills (p. 6). In essence, a library provides an ideal location along with library staff to act as judges or mentors and these events are a great way for libraries and librarians to connect with others in their communities.

Maras, M. (2018, May 10). 4 ways ‘internet of things’ toys endanger children. *The Conversation*. <https://theconversation.com/4-ways-internet-of-things-endanger-children-94092>

This article talks about the huge increase in “internet of things” connected toys that have been flooding onto the market. Specifically, these toys are aimed at children and their advertisements point towards improving play, providing more collaborative play situations, and developing children’s skills in literacy, numbers, and social interactions. While increasing children’s developmental milestones through connected toys is a relatively new concept, the concerns about children’s privacy and security are not. A huge factor is the unsecured wireless connections that these toys make automatically, connecting to apps without any form of authentication (p. 2). These connected toy devices are now available for a hacker to have the ability to communicate directly with a child through the toy. The fact that many of these toys monitor children has come under fire in countries with strict anti-surveillance laws, such as Germany (p. 2). Unsecured

devices can even communicate with other internet-connected devices, resulting in situations where a toy could be used remotely by a hacker. Internet-connected toys are often equipped with GPS as well, giving children's locations along with the toy's identifying information. When these toys have cameras that watch kids and microphones that record them, anyone can now hijack a family's personal information (p. 3). Working with third parties means that a toy company has the ability to share information they collect about kids with other companies... and they do not have to inform you about it (p. 4). Bottom line, parents need to do their due diligence and research connected toys before making a purchase that puts their child's privacy at risk.

Pichman, B. (2018, May). Top tech for your gaming spaces. *Computers in Libraries*. 38(4), 33-36. <https://search-ebscohost-com.proxy.lib.edu/login.aspx?direction=true&db=lf&AN=129633562&scope=site>

This reference focuses on the increase in technology toys that are becoming readily available. Students will need skills in the future that allow them to think, make, innovate, and collaborate to find solutions in today's changing world. Libraries have always been on the forefront of advancing technology, and these high-tech materials and toys can get students interested in the fields of electronics, circuitry, engineering, robotics, coding, and much more (34). Examples of toys that provide tangible play are Tiggly, Osmo, and Cubetto. Tiggly is perfect for the younger set to assist in learning about shapes, letters, and numbers. Osmo is a game that incorporates both digital play and physical play while also using reflective artificial intelligence. Both of those high-

tech games require I-Pads. Cubetto is a relatively new tech toy that teaches coding to younger learners by using play mats that coordinate with stories. If a librarian is looking for a fun group activity, take a look at Squishy circuits. Students will learn about conductive and non-conductive dough and how it can be used to create light-up displays while also teaching about circuitry. If your library is looking to start or expand its robotics program, there are several options such as Finch, Wink, and Ozobots. For libraries that lack a stellar budget, 3-D Doodler pens allow students to create and think in 3-D design without an expensive 3-D printer. A newcomer on the tech market is Microsoft Hololens, which offers “a virtual and augmented reality experience like no other” (p. 36). It’s an educational experience that students will not soon forget as they walk through the solar system, explore Roman ruins, or interact with augmented charts and graphs. Tech toys are becoming a fun and educational trend for libraries, even those on a limited budget.

Singer, N. (2015, March 28). A wi-fi Barbie doll with the soul of Siri. *The New York Times*. <https://www.nytimes.com/2015/03/29/technology/a-wi-fi-barbie-doll-with-the-soul-of-siri.html>

This article provides some excellent background information on the start of the connected toy era. Ever since Siri appeared on their parents’ I-Phones, kids have dived headfirst into conversations with the humanoid voice. They want to know her backstory, her likes and dislikes, ask her for a joke, and quiz her on trivia. “At a time when grown-ups can use voice commands to find restaurants, change channels on their TVs or get

directions, it seems logical that children would now expect devices to understand their speech and respond in kind” (p. 1). In 2011, the company ToyTalk was created when one of the founders had a conversation with his young daughter. She said she wished she could Skype with her stuffed animals. The idea was born for animated conversational apps “that encourage young children to engage in complex dialogue with a menagerie of make-believe characters” (p. 2). Mattel even has plans to introduce Hello Barbie, a doll with the ability to analyze a child’s conversations as it interacts with the doll and use that data to create relevant responses. While some critics point out privacy concerns, others in the early educational field are quick to defend these connected toys for their role in children’s imagination, learning, and social development. In fact, a study done with toddlers at Georgetown University using two groups: one that played with plush animals programmed to know the child’s name, likes, and favorite songs and another group with plush animals that gave generic information and sang random songs. After interacting with their plush toys, the group that received personalized connected toys scored higher on math skills than the group that received a generic toy (p. 3). While the toys are only as good as the programming used to create them, the professor leading the study “said that toys able to personalize their responses to children in real time could have an even greater effect on them” (p. 3). This new era of interactive toys could be embraced as a way for children to develop better, more advanced conversational skills and imaginative play.

Questions for Classmates

Fandom

- 1) What types of challenges may make fandom difficult for a group?
- 2) What are some ways a fandom group could use library resources?

Robots

- 1) What are some privacy concerns that could occur with the use of robots?
- 2) Do you think robots will take over library jobs one day?

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