Creating an Innovation Space in an Academic Health Sciences Library: Supporting the Three Missions, Innovation, Collaboration, and Interprofessionalism

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A simple search of the Internet using the phrase "3D printing healthcare" reveals thousands of articles, primarily in the past two-three years, discussing the intersection of these new technologies and healthcare. Examples include:

Learning tools for students.
Aortic valve scaffolds for clinical care.
Research in tissue engineering.
Wearable technology to monitor patients.

Applications of these new and emerging technologies are only limited by user imagination. The health science students of today will become the researchers and practitioners of tomorrow and need opportunities to investigate new technologies. Exposure and access to these new types of information resources will be imperative for pedagogical and entrepreneurial reasons. By locating these information resources in a neutral space such as the library they are available to students, faculty and staff from all disciplines, fostering multidisciplinary exploration and innovation.

UNIVERSITY of MARYLAND
Health Sciences and Human Services Library

April 2014

Makerspace Task Force formed

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Arranged meeting with campus stakeholders

May 2014

Literature Review

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Investigated 3D modeling software (TinkerCAD and Google SketchUp)

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Began environmental scan of academic & public library and local makerspaces

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Began investigation of hardware, software and materials

June 2014

Began visiting local makerspaces

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Produced guide to using 3D modeling software

July 2014

Submitted a proposal for creating a makerspace at HS/HSL to library administration with detailed technical specifications, proposed service model, location and staffing

August 2014

Introduced makerspace concept for HS/HSL to staff

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Purchased 3D printers and 3D scanner

September 2014

Developed case report to introduce the makerspace at HS/HSL idea to campus stakeholders

Full case report available online at HSHSL's Digital Archive: http://hdl.handle.net/10713/4634

October 2014

Met with campus stakeholders again to share findings and proposal

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Visited the dental school to view their use of 3D modeling and printing technology

November 2014

Began 3D printing training for Reference and IT staff using Lynda.com

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Created a 3D printing libguide available at guides.hshsl.umaryland.edu/ispace

December 2014

Paired Reference and IT staff for hands-on training to download, repair and print 3D models

January 2015

Makerspace committee is formed

February 2015

Confirmed location of Makerspace

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Purchased additional items for Makerspace (powerful computer, molecular model sets, software licenses, camera for streaming video, and button maker)

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Developed policies and procedures for running the Makerspace and wrote disclaimer for liability and copyright restrictions

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Created step-by-step service workflow and decided on pricing model and method of payment

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Use LibCal for reservations

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Designated IT and Reference staff for required introduction for patrons

March 2015

Created a marketing plan

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Requested furniture move to build the makerspace

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Announced contest to name the makerspace [Innovation Space]

April 2015

Grand Opening

June 2015

Hired an Emerging Technologies Librarian

October 2015

Doubled Innovation Space physical footprint in conjunction with library renovations

November 2015 - Present

Outreach efforts include a new Innovation Space Newsletter with 239 subscribers (and growing.)

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Introduced courses and workshops using 3D and other new technologies 250+ attendees

Courses include:
Introduction to 3D Printing
Introduction to 3D Modeling
Introduction to Data Analysis and Visualization with R
Create a Data Management Plan with the DMP Tool
Using GitHub.com to Manage your Scholarly Work

To learn more about the HS/HSL Innovation Space visit http://www.hshsl.umaryland.edu/services/ispace/ for newsletter subscription, registration, cost and class information.