

# Modern Library Practices amid the Emergence of Advanced Technology

**Fernan R. Dizon**

Libraries: Surviving the Digital Revolution

16<sup>th</sup> September

Main Library

Jose Rizal University

# Outline

- Laws of Librarianship (Old vs. New)
- ACRL Trends
- Embedded Librarianship
- Makerspace
- Internet of Things (IO)
- Big Data & Data Analytics
- Augmented Reality
- Gamification
- Library as Third Space

# Librarians' maxim

***“People no longer have to come to a library to get information, so the library has to get people coming in for different reasons.”***

***Vangelova (2014)***

# 5 Laws of Librarianship

## **S.R. Ranganathan (1931):**

- Books are for use.
- Books are for all; or, Every reader his book.
- Every book its reader.
- Save the time of the reader.
- A library is a growing organism.

## **Crawford & Gorman (1995):**

- Libraries serve humanity.
- Respect all forms by which knowledge is communicated.
- Use technology intelligently to enhance service.
- Protect free access to knowledge.
- Honor the past and create the future.

**The new laws offer a framework within which libraries can survive and progress. They provide a tool enabling us to think about libraries and technology clearly and rationally.**

# ACRL 2016 top trends in academic libraries

- Research data services (RDS)
- Data policies and data management plans
- Professional development for librarians providing RDS
- Digital scholarship
- Collection assessment trends
- ILS and content provider/fulfillment mergers

# ACRL 2016 top trends in academic libraries

- Evidence of learning: Student success, learning analytics, credentialing
- New directions with the Framework for Information Literacy for Higher Education: Digital fluency in the Framework
- Critical information literacy in the Framework
- Altmetrics
- Emerging staff positions
- Open Educational Resources (OER)



Blast from the past

# DIGITAL TRENDS FOR LIBRARIES TO FOLLOW 2016

AXIELL



Big Data



Obsession with the present



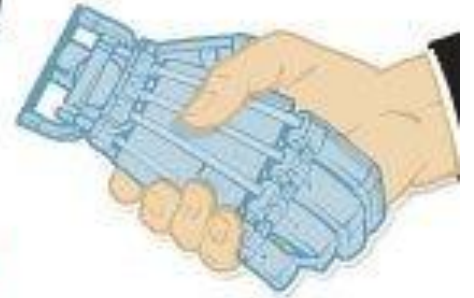
The AI Advisor



The 3rd place



Ex Machina



Internet of Relations

# True or False?

“Librarians used to be seen as the gatekeepers of information, allowing access to the library’s resources, now the librarian’s role has pivoted to that of tour guide. No sane academic would deny the depth of information resources that technology has provided to modern society, but the issue lies with information literacy and if or how people use the information they find.”

Stuart (2017)



# Embedded Librarianship

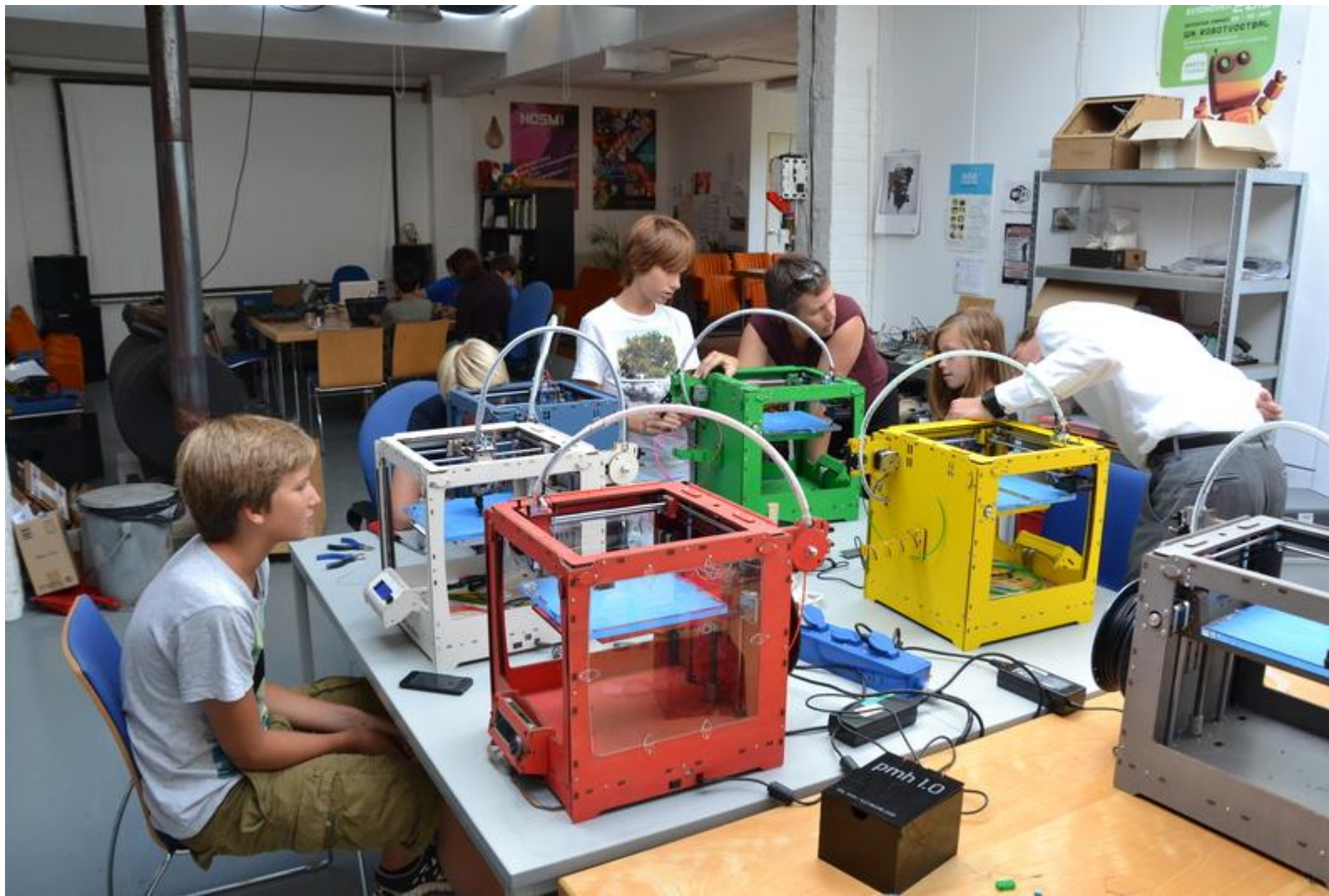
# Embedded Librarianship

Responding to higher education development and challenges In addition to the motivations above, LMS embedded librarianship can also address four current trends and challenges in higher education:

- the rise of online learning;
- the increasing use of open educational resources (OERs);
- the need to improve digital literacy, and;
- the focus on student success

Burke and Tumbleson (2016)

Makerspace



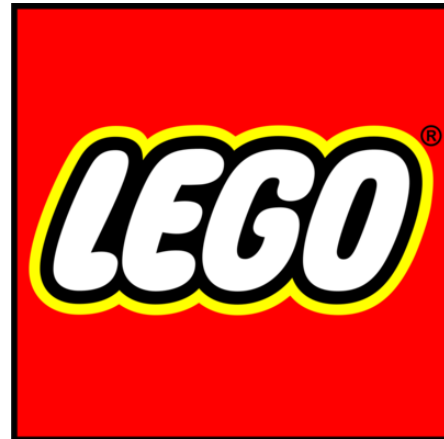
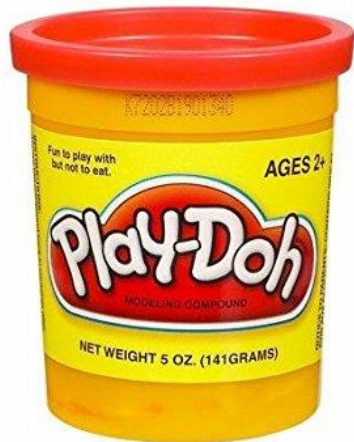
- a space that has been designed to allow users to create, build, and learn new projects and technologies.
- Makerspaces revolve around people creating and working together to build unique items, using a supply of tools would be inaccessible or expensive for individual users.



# Makerspace


littleBits

a littleBit of geeky fun!



# MAKER

# SPACE

 "If you can  
**imagine** it, then  
you can **make** it"

## Impact Areas:

**Inspiration:** inviting students to participate in the creative economy and to direct their own future

**Innovation:** serving as a catalyst for grassroots invention

**Education:** building a connection between the community and learners

## What is it?

"Learning environments rich with possibilities, Makerspaces serve as gathering points where communities of new and experienced makers connect to work on real and personally meaningful projects, informed by helpful mentors and expertise, using new technologies and traditional tools"

## A MakerSpace Manifesto

- Everyone is a maker
- Our world is what we make it
- If you can imagine it, you can make it
- If you can't open it, you don't own it
- We share what we make, and help each other make what we share
- We see ourselves as more than consumers—we are productive; we are creative
- Makers ask, "What can I do with what I know?"
- Makers seek out opportunities to learn to do new things, especially through hands-on, DIY interactions
- The divisions between subjects like Math and Art and Science dissolve when you are making things. Making is an interdisciplinary endeavor
- It's alright if you fail, as long as you use it as an opportunity to learn and make something better
- We're not about winners and losers. We're about everyone making things better
- We help one another do better. Be open, inclusive, encouraging, and generous in spirit
- We celebrate other makers—what they make, how they make it, and the enthusiasm and passion that drives them



Source: <https://denverubow.files.wordpress.com/2015/07/maker-club-1.png>  
[https://3dprint.com/wp-content/uploads/2016/03/3dp\\_fusion3\\_ncsu\\_dh\\_hill\\_makerspace-e1456840871429.png](https://3dprint.com/wp-content/uploads/2016/03/3dp_fusion3_ncsu_dh_hill_makerspace-e1456840871429.png)

IOT

Internet of Things (IOT)





# Internet of Things

*The Internet of Things* (IoT) is a term used to describe the trend of more and more devices being connected to the Internet and to each other. As smartphones, wearable data collection devices, and other "connected" products become more common, the IoT is becoming more useful and more popular. The IoT became a real factor during the early 2010s, as high-speed Internet became more readily available and hardware and software became less expensive to produce. It has been said that IoT could potentially affect all devices with an on/off switch. The impact of the IoT will most likely be far-reaching, as it will affect people's personal lives as well as businesses.

Mohn (2016)

# Big Data & Data Analytics

# Big Data

- Big data refers to a technology phenomenon that has arisen since the mid-1980s. As computers have improved, growing storage and processing capacities have provided new and powerful ways to gain insight into the world by sifting through the infinite quantities of data available.

Source: Big data. By: Dewey, Joseph, PhD, Salem Press Encyclopedia, January, 2017



Source: <http://accelerator.smu.edu/big-data-curriculum.html>

# Big Data

Big data is characterized by three Vs: Volume, Velocity, and Variety

Bieraugel (2013)



Source: <http://gds.libguides.com/bigdata>

# Data Analytics

Data analytics is "the systematic use of data and related business insights developed through applied analytical disciplines (e.g., statistical, contextual, quantitative, predictive, cognitive and other [including emerging] models) to drive fast-based decision making for planning, management, measurement and learning". Such analytics can be descriptive, predictive or prescriptive.

IBM (as cited by Ong, 2014)

## Types of Data Analytics

### Level 1: Descriptive Analytics

- To use historical data to understand what has happened
- To classify and categorise historical data

*What happened?  
Why did it happen?*

### Level 2: Predictive Analytics

- To predict future activities by understanding the past

*What will happen?*

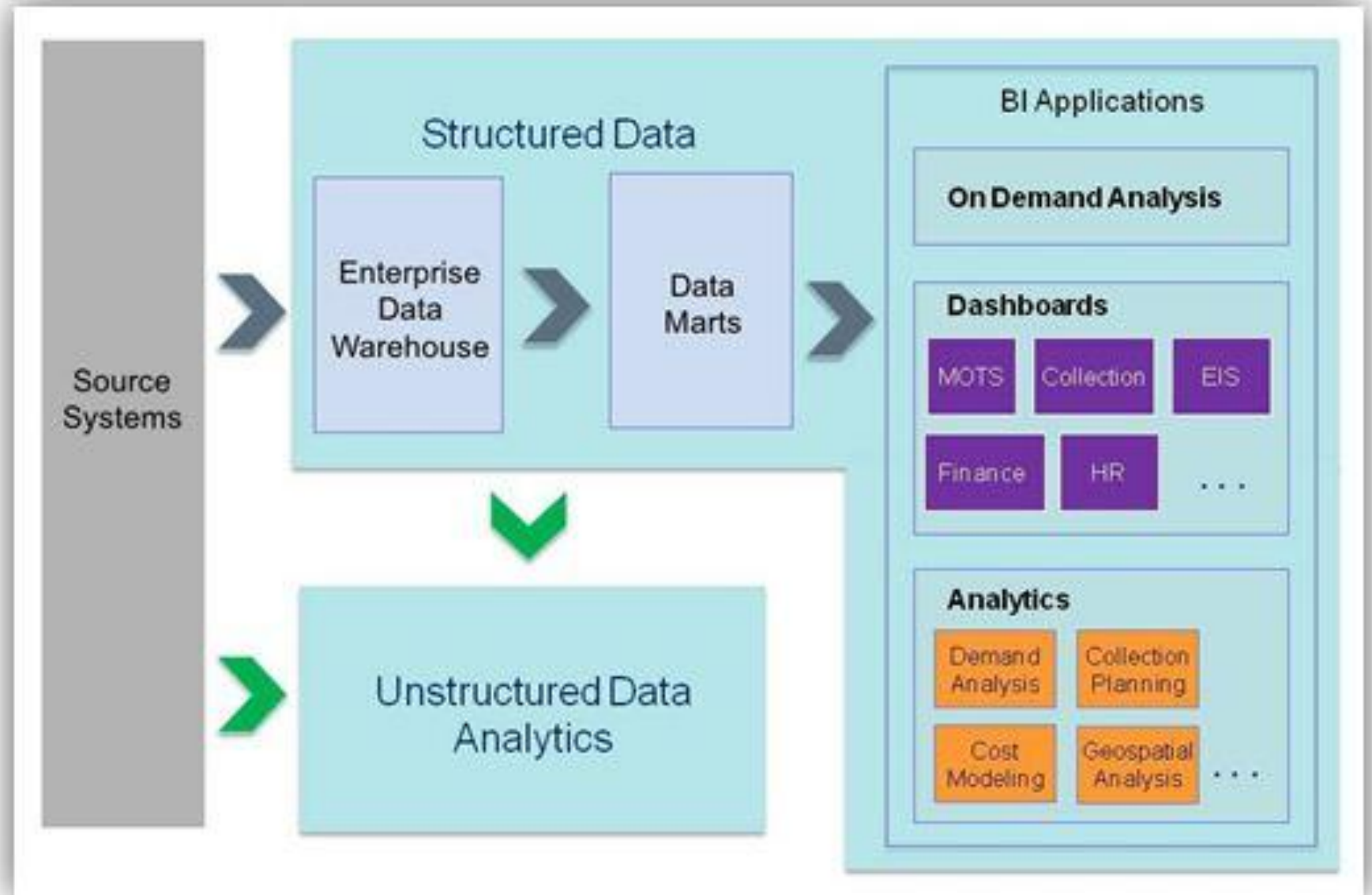
### Level 3: Prescriptive Analytics

- To recommend actions to take that optimise outcomes

*What should I do?*

**Decision Insights**

# Data Analytics at the National Library Board Singapore



Ong (2014)

Augmented Reality







## Special Collections Room 301L

Special Collections is a collection of rare and unique materials, including books, magazines, photographs, and original sketches. The collection dates primarily from the late 1800's to the mid 1900's. The library staff is working to preserve and catalog all of the materials in the collection. So far, three collections have been cataloged and are ready for use:

Book Collection  
Magazine Collection  
Pattern Collection

You can browse for SC items in the online catalog. If you would like to view something from this collection, please ask at the Reference Desk.

# Augmented Reality

---

- Augmented reality is “the use of technology which allows the perception of the physical world to be enhanced or modified by computer-generated stimuli perceived with the aid of special equipment.” Most frequently, this is achieved by viewing surroundings through the camera of a smartphone or tablet, though it can also be done using other devices.

(Spina, 2014)



# AR Dinosaurs

Gamification

# Gamification

- Academic libraries are using gamification for instructional and promotional activities.

## THE BUSINESS OF GAMIFICATION

### WHAT IS GAMIFICATION?



Gamification is the use of elements of game play in non-game contexts



It provides rewards and engagement for customers

### HOW GAMIFICATION WORKS:

#### 5 COMMON MECHANICS



#### POINTS

Measure a user's achievements in relation to others  
Can double as currency to exchange for rewards



#### BADGES

Reward achievements visually



#### LEVELS

Encourage users to progress and unlock new rewards



#### LEADERBOARDS

Organise players by rank



#### CHALLENGES

Encourage engagement by offering specific tasks to complete

#### 4 MAIN WAYS TO DRIVE ENGAGEMENT



#### ACCELERATED FEEDBACK CYCLES



#### CLEAR GOALS AND RULES OF PLAY



#### A COMPELLING NARRATIVE



#### CHALLENGING BUT ACHIEVABLE TASKS

# Gamification: Definitions

“Gamification (of learning and instruction) is the delivery of content—for a purpose other than pure entertainment—using game-based thinking and mechanics.”

- Kapp (as cited by Kim, 2015)

“Gamification is the use of game mechanics and experience design to digitally engage and motivate people to achieve their goals.”

- Gartner (as cited by Kim, 2015)

“Gamification could be more narrowly defined as incorporating game elements into a non-gaming software application to increase user experience and engagement.”

- Dominguez et al. (as cited by Kim, 2015)

# TYPES OF GAMIFICATION USERS

## WHAT THEY NEED:

- SURPRISE, INSPIRATION, FUN

## GAME MECHANICS:

- LUCK AND QUICK SUCCESS GAMES, PRIZES, BOOSTERS

## GAMIFICATION EXAMPLE:

- FORTUNE WHEEL



ENJOYER

## WHAT THEY NEED:

- ACHIEVEMENTS AND COLLECTION

## GAME MECHANICS:

- BADGES, LEVELS, SIMPLE TASKS, PROGRESS BARS

## GAMIFICATION EXAMPLE:

- REVIEWS BADGES



FARMER

## WHAT THEY NEED:

- STATUS, INFLUENCE, ACCEPTANCE

## GAME MECHANICS:

- LEADERBOARDS, DUELS, EXTRA OPTIONS

## GAMIFICATION EXAMPLE:

- USERS RATING



SELF-SEEKER

## WHAT THEY NEED:

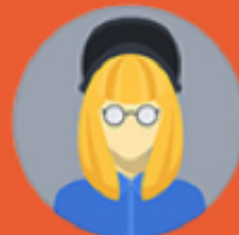
- CONTACTS, COMMUNICATION, PRIVILEGES

## GAME MECHANICS:

- CHATS, MENTORING, COMMUNITIES

## GAMIFICATION EXAMPLE:

- ADVICE SECTION



NETWORKER

# Library as Third Space



Library as  
Third Space



# Library as Third Space

Emotionally healthy every person needs three places: home, work, and a third as yet undefined place. Home should be safe and comfortable, work should be consistent and satisfying, and the third place, which represents our informal public life, is where other needs should be met.

Third places are public spaces on neutral ground where people can gather and interact. IN contrast to first places (homes) and second places (work place/schools), third places allow people to put aside their concerns and simply enjoys the company and conversation around them.

Oldenburg (as cited by Bruxvoort, 2017)

# Library as Third Space

Libraries as third place provide:

1. A level playing field;
2. has long hours, is low stress, interactive, and;
3. has a loose structure.

Bruxvoort (2017)



Media Library [Third-Place] in Thionville, France

# Library as Third Space

“We remain vital to our communities through innovation and adaptation, and the third space construct provides a framework for moving confidently through constant change. The subtitle of *The great good place* is Cafes, coffee shops, bookstores, bars, hair salons and other hangouts at the heart of a community. The library as the ‘heart of the campus’ is a cliché, but this updates it nicely. The academic library as the heart of the community provides not only a strong stance for the library, but provides a place where our students can study, interact and relax within their schedules and without pressure.”

Bruxvoort (2017)

Conclusions

# Conclusions

“The reality is that we can’t future gaze. My view is that it is important to bring people together; learning is a social activity. The modern library has adapted healthily to today’s modes of learning and accessing information. It will react again to future needs and remain at the heart of communities for many years to come.”

Solk (2016)

# Conclusions

“The library of tomorrow must be one that retains not only the best of the past but also a sense of the history of libraries and of human communication. Without that, the library will be purely reactive, a thing of the moment, sometimes useful and sometimes not but never central to human society. With a sense of history and the knowledge of enduring values and the continuity of our mission, the library can never be destroyed.”

Gorman (1995)



# References

- ACRL Research Planning and Review Committee. (2016). 2016 Top trends in academic libraries: A review of the trends and issues affecting academic libraries in higher education. *College & Research Libraries News*, 77(6), 274-281. doi:<https://doi.org/10.5860/crln.77.6.9505>
- Bagley, C. A. (2014). *Makerspaces: top trailblazing projects : A LITA guide*. Chicago, Illinois: ALA TechSource.
- Bieraugel, M. (2013). *Keeping up with... big data*. Retrieved from [http://www.ala.org/acrl/publications/keeping\\_up\\_with/big\\_data](http://www.ala.org/acrl/publications/keeping_up_with/big_data)
- Bohyun, K. (2013). *Keeping up with... gamification*. Retrieved from [http://www.ala.org/acrl/publications/keeping\\_up\\_with/gamification](http://www.ala.org/acrl/publications/keeping_up_with/gamification)
- Bruxvoort, D. (2017). Library as third place A strategic framework. *SCONUL Focus*, 68, p.13-14 Retrieved from [https://www.sconul.ac.uk/sites/default/files/documents/3\\_18.pdf](https://www.sconul.ac.uk/sites/default/files/documents/3_18.pdf)

# References

- Burke, J. J., & Tumbleson, B. E. (2016). LMS embedded librarianship and the educational role of librarians. *Library Technology Reports*, (2), 5.
- Gorman, M. (1995). 5 New laws of librarianship. *American Libraries* p.784-785
- Kim, B. (2015). Chapter 2: Gamification: examples, definitions, and related concepts. *Library Technology Reports*, (2), 10.
- Mohn, E. (2016). Internet of things. *Salem Press Encyclopedia Of Science*
- Ong, G. (2014). *A smarter library: Using data analytics to improve resource management and services at NLB*. Retrieved from <https://www.ccollege.gov.sg/Knowledge/Documents/Website/A%20Smarter%20Library.pdf>
- Solk, A. (2016). *The changing nature of libraries in the digital age*. Retrieved from <https://www.sheppardrobson.com/news/opinion/article/the-future-of-libraries-in-the-digital-age-by-alex-solk>
- Spina, C. (2014). *Keeping up with... augmented reality*. Retrieved from [http://www.ala.org/acrl/publications/keeping\\_up\\_with/ar](http://www.ala.org/acrl/publications/keeping_up_with/ar)
- Stuart, A. (2017). *Embedded librarianship: the future of libraries*. Retrieved from <https://blog.oup.com/2017/07/medical-library-resources/>
- Vangelova, L. (2014) *What does the next-generation school library look like?* Retrieved from <https://ww2.kqed.org/mindshift/2014/06/18/what-does-the-next-generation-school-library-look-like>