## **UX Singularity:**

Making a usable, accessible, and inclusive <u>website</u>

### **MiALA 2023**

Kevin Finkenbinder, Sruthin Gaddam, & Joshua Ethan Sanchez <u>bit.ly/UXSingularity</u>







### Kevin Finkenbinder

Software Applications Developer

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### Sruthin Gaddam

UX Librarian gaddamsr@msu.edu



### Joshua Ethan Sanchez

Head of UX jes@msu.edu

## **Additional Team Members**

### Jenny B.

Digital Interface Designer

### Shelby K.

UX Designer

### Shel V.

Web Applications Designer & Developer

## **Project Background**

- Website redesign
  - Last redesign > 10 years ago!
- UX research identified areas for improvement
  - Usability, architecture, functionality, and more!
- Drupal 7 end of life Nov. 2023

## **Project Background**

- Team formed Summer 2021
- Project kickoff Fall 2021
- Estimated launch date of August 2023

Inclusive Design

## **Development philosophy**

- Agile philosophy
  - Collaborative teams that accomplish together.
- Scrum methodology
  - Facilitating the collaboration
  - Iterating quickly

### 67

"Inclusive design empowers designers to create products whose experiences serve as many people as possible... and enhances the user experience for a diverse audience."

Morales, J. (2021, May 11). What Is Inclusive Design? Principles and Examples.

## Inclusive design practices

- Stakeholder engagement throughout the design phase
- Striving for consistency across sites, pages, elements, & interactions
- Incorporating AllY best practices throughout design and development process

## Inclusive design practices

• Designing for all : Building equitable experiences across all platforms

• Designing for cognitive disabilities

### Accessibility Design: Strategies for Universal Usability

- Accessibility at the forefront of our design and implementation
  - Ally 1<sup>st</sup>, Mobile 2<sup>nd</sup>
- Enlisting help from outside resources during design phase

### Accessibility Design: Strategies for Universal Usability (cont.)

- Build for Ally (e.g. require alt text)
- Developing a guide to assist content editors
   <u>Design System</u>
- Training content editors
- Editorial review for Ally

## Ally tools in our workflow

### • FIGMA Tools

- <u>Ally Color Contrast</u>
   <u>Checker</u>
- o <u>Stark</u>
- <u>Adee</u>
   <u>Comprehensive</u>
   <u>Accessibility Check</u>

- Browser renderer panels
  - Safari, Chrome, Firefox, Edge, etc.
- Single Page Ally Checks
  - <u>Axe Dev Tools</u>
  - WAVE Evaluation Tool

## Ally tools in our workflow

- Vision Related Tools
   Screen Readers
  - Brandwood Ο

(Text over images)

- Colorblindly Chrome 0 Plugin
- Colour Contrast  $\bigcirc$ Analyzer (Color Modification)

- - JAWS (PC) Ο
  - NVDA (PC) Ο
  - VoiceOver (Mac) Ο
  - Orca (Linux) Ο
- Automated Tests
  - Cypress/Axe Ο (docker image)

### K MICHIGAN STATE UNIVERSITY **MSU** Libraries

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### Page not found (404) This might be because: · We've moved or renamed the page · There's a small typo in the web address · The web address wasn't copied/pasted fully · The page no longer exists Try searching our website for a page that: Contains any of these words \* Keywords

Citation information goes here

### 6 Libraries

- MSU Libraries
   366 W. Circle Drive East Lansing, MI 48824 USA
- B (517) 353-8700

### Frequently asked questions Accessibility statement Report an accessibility issue Privacy statement Library units Staff directory

MICHIGAN STATE Call MSU: (517) 355-1855 Visit: msu.edu MSU is an affirmative-action, equal opportunity employer. Notice of Nondiscrimination UNIVERSITY SPARTAMS WILL | Michigan State University

### 404 Mobile Landing Page



Page not

found (404)

This might be because: We've moved or





Citation information goes here

exists

### Try searching our website for a page that:

Contains any of these words -

Keywords



### renamed the page There's a small typo in the web address

- The web address wasn't copied/pasted fully
- The page no longer

### • We've moved or renamed the page

- · There's a small typo in the web address
- The web address wasn't copied/pasted fully
- The page no longer exists

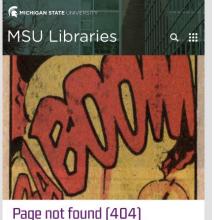
This might be because:

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Try searching our website for a page that:

-

Contains any of these words



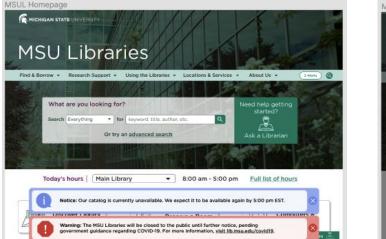
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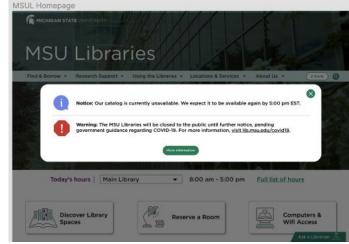
Still need help? Ask a Librarian for assistance.

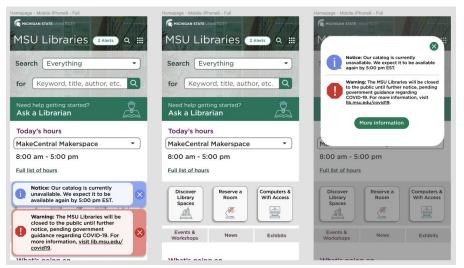
**Discover Library spaces** 

Employment Support the Libraries Site map

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## **Collaborative development**

- Practicing iterative development
   Large tasks broken down into smaller more
  - achievable tasks
- Engaging in constant feedback cycle from the team and stakeholders

## **Collaborative development**

 AllY first web development

 Automated and manual tools (plugins, cypress, manual color checking, etc.)

- Failing productively
  - Learning & correcting course early in the process.

## **Collaborative development**

Exhibits

News



## **Inclusive development practices**

### • Website Advisory Group

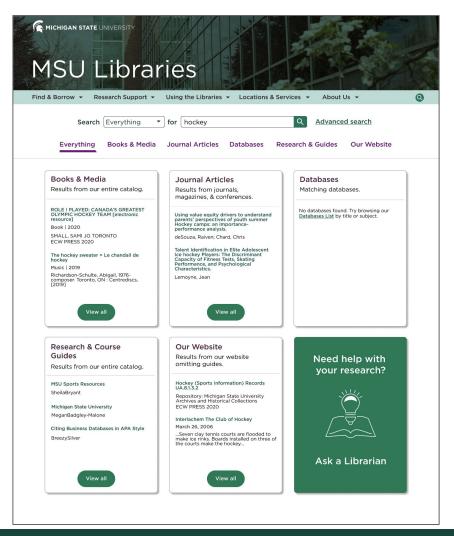
- Consultants, focus group participants, feedback and brainstorming specialists
- Stakeholder review/feedback session
  - Facilitating the collaboration
- Open sprint reviews
  - All staff welcome and encouraged to participate

## **Collaboration = impact**

- Re-evaluating our design during development.
   Identified a need to search an additional source
  - Altered the design to accommodate the new priorities

• Sometimes 10% difference is very impactful

### **Bento Box**



## Bento Box

Search					
Everything	for hockey		() Q		
Or try an advanc	ed search for <u>Books &amp; Media, Journal Articles, Databases</u> , or F	lesearch & Course Guides			
	lournal Articles Databases Research & Course Gu				
Results	from the Catalog, Articles, Databases, Online Journals, and G	uides and more.			
Books & Media	Journal Articles	Databases			
More than 100 results found within the MSU Library catalog.	More than 100 results found within journals, magazines &	0 results found within MSU Library databases.			
Hockey	conference proceedings.	No results found for hockey			
Sherman, Jill	Modelo técnico del push de empuje en el hockey sobre césped. Una propuesta de análisis. / Technical model of				
🔲 eBook	the				
Hockey : A Global History	Moreno de la Fuente, Joaquín; Rojas-Briceño, Luis et al.				
Stephen Hardy; Andrew C. Holman	Retos: Nuevas Perspectivas de Educación Física,				
Andrew C. Holman	Deporte y Recreación 2022, Vol. 45, p318 8p.				
	The Role of the Hand Surgery Consultant in the Care of				
Hockey : Challenging Canada's Game - Au-delà Du Sport National	the Hockey Athlete. French, Rodney J.				
Jenny Ellison;	Sports Medicine & Arthroscopy Review Dec2022, Vol. 30				
Jennifer Anderson	Issue 4, p189 7p.				
eBook	Análisis del Rendimiento Físico en Jugadores de Hockey				
Hockey	sobre Césped sub 14. / Analysis of Physical Performance in				
Julie Murray	Mauricio Foresto, Walter				
eBook	Revista Ciencias de la Actividad Física UCM jul-dic2022,				
Hockey : An Introduction to Being a Good Sport	Vol. 23 Issue 2, p1 13p.				
Aaron Derr	Unsettling the Myth of Canadian Nationhood: Hockey and Embodied Indigenous Sovereignties.				
E eBook	Norman, Moss E.;				
	Petherick, LeAnne et al.				
View all	Sociology of Sport Journal Dec2022, Vol. 39 Issue 4, p323 10p.				
	LESIONES EN HOCKEY LÍNEA: FACTORES DE RIESGO Y				
	MEDIDAS DE PREVENCIÓN. / INLINE HOCKEY				
	INJURIES: RISK FACTORS AND PREVE Moreno-Alcaraz, V. J.;				
	Cejudo, A. et al.				
	Revista Iberoamericana de Ciencias de la Actividad Física y el Deporte dic2021, Vol. 10 Issue 3, p1 17p.				
	Pisica y el Deporte dic2021, Vol. 10 Issue 3, pl 17p.				
	View all				
Research & Course Guides	Course Reserves	Our Website			
Approximately 4 results found within MSU Library research & course guides.	0 results found within MSU Course Reserves	0 results found within MSU Library website			
MSU Sports Resources	No results found for hockey	No results found for hockey			
Bryant, Sheila					
Mishigan Chata University					
Michigan State University Badgley-Malone, Megan					
MSU Sports Collections at MSU Archives & Historical Collections					
adgley-Malone, Megan					

# What we've done so far...

### Before:

### <u>Libraries Homepage</u>

ISU LIBRARIE		Using the Library	Computers	Event	s
Search Articles, Books & Media, I	Databases and more	Search		Spring 2023 message	1
Try our new catalog ( Today's Hours			ning Events	from the Dean	
lain Library Open 24 Hours	Collections and Libra	aries Therapy 10:00 an	Dog Visits n - 12:00 pm	News @ MSU Libraries	
Hollander 8:00am to lakeCentral 10:00pm ervice Desk	Course Reserves	2023	day, February 22 age Table Open	Libraries	
Digital and 9:00am to Multimedia 9:00pm Center	Guides & Tutorial	s Wednese	ours - 3:00 pm day, February 22		
Art Library 9:00am to 12:00pm	Get It @MSU (Interlib Loan, Document Deliv		Sustain: Perler		
Reference 9:00am to 1:00pm	Reserve a Room	Wedness 2023	- 5:00 pm day, February 22		
Murray and Make an ong Special appointment Collections	Your Library Accou		e events »»		
st Business 8:00am to Library 5:00pm					
More Hours »»					



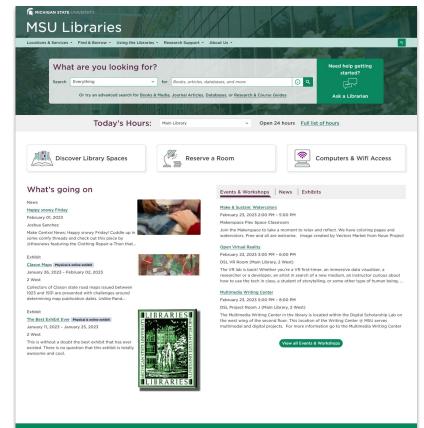
Interactive virtual tours of the Main Library's <u>first floor</u>, <u>Digital Scholarship</u> <u>Lab</u>, and <u>Green Room</u> are available to view before visiting. Check out these Library spaces today!

View or search all of MSU Libraries' Features

### After:

### **Redesigned Libraries**

### <u>Homepage</u>



### K Libraries

MSU Libraries
 366 W. Circle Drive
 East Lansing, MI 48824 USA

6 (517) 353-8700

Accessibility statement Report an accessibility issue Privacy statement Library units

Frequently asked questions

Staff directory

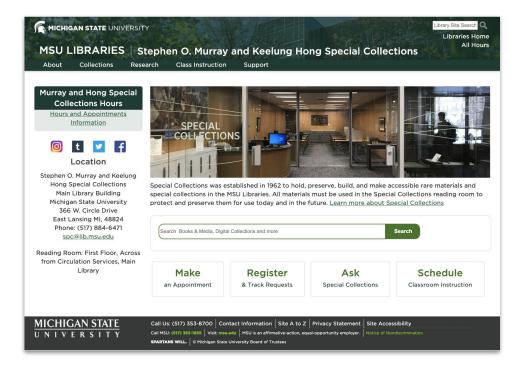
Employment Support the Librar Site map 양 ⓒ 닷가 匝

Discover Library spaces

### Before:

### **Special Collections**

<u>Homepage</u>

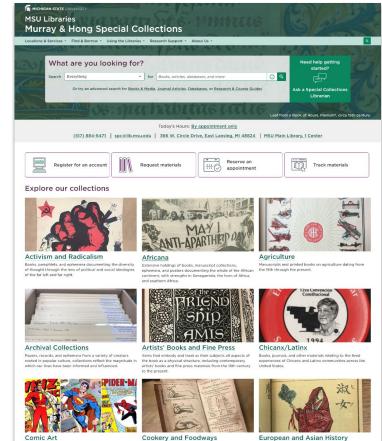


### After:

### **Redesigned Special**

### **Collections**

## <u>Homepage</u>



American and international culinary traditions and foodways. A wide range of manuscripts and printed books documenting including community and commercially produced cookbooks, all aspects of European history, along with Japanese and Chinese books on the history, culture, and literature of those







Comic Art The world's largest collection of comic books, graphic novels, and books and journals about comics.





menus, and ephemera.



## **UX** Testing

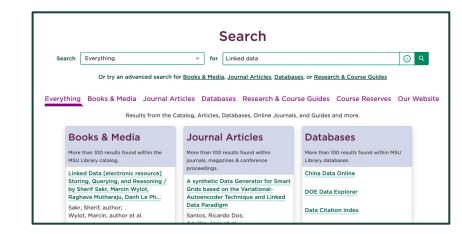
- Involves recording of activities, feelings and thoughts of users as they try to complete a task
- Helps identify obstacles and pain points while generating ideas for improvement
- A total of 19 participants including students, staff, & faculty

## Recruitment

- A library wide email was sent out to staff and faculty with a link to a sign-up sheet.
- Students from the XA program were encouraged to sign-up for the test.
- Total of 19 participants including students, staff, & faculty were recruited during this process.

		Main	Library H	lours		
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	Choose a location or se	ervice: Main Library	✓ and choo	ose a date: 03/2023	E GO	
March 202	3 - Main Libra	ary				
< Previous month	Next month >	-				
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	1		_	
				2	3	
		Location Week vie location or service:	& Servic	e Hours	3	
Main Librai	Choose a	Location Week vie location or service:	& Servic	e Hours		

- Only 2 participants used the top navigation bar
- Information under the search was "too overwhelming" for many users



"I like the [right side] better than the What's going on section."

"It is going to look lame and outdated"

### What's going on

### News

Giving Tuesday February 23, 2023

Elise Jajuga Happy #GivingTuesday! Are you looking for a way to give back to MSU? The @MSULibraries and the @MSUArchives would love support ...

### News

Joshua Sanchez

Make Central News: Happy snowy Friday! Cuddle up in some comfy threads and check out this piece by @thesnews featuring the ...

Exhibit The Best Exhibit Ever Physical & online exhibit

11 2027 January 25 202



### Beal Botanical Garden Tour: Spring Ephemerals at the Beal Botanical Garden In progress

May 11, 2023 12:10 PM - 12:55 PM

Beal Botanical Garden (shed)

Join Carolyn Miller, Plant Recorder for the Beal Botanical Garden, for a lunchtime spring tour of the garden to enjoy spring wildflowers, discover what the garden staff are doing to restore native plants and habitat along t...

### Visiting scholar talk: Elizabeth Shermer, Lovola University Chicago

May 16, 2023 12:00 PM - 1:00 PM

Special Collections Seminar Room (Main Library,1 West)

Seven researchers from outside MSU have been awarded visiting scholar grants from Murray & Hong Special Collections for summer 2023. Each will give a presentation on their research during their week of residence. Today'...

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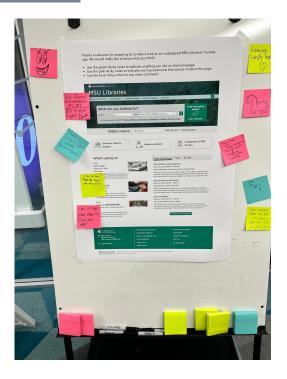
Happy snowy Friday February 01, 2023

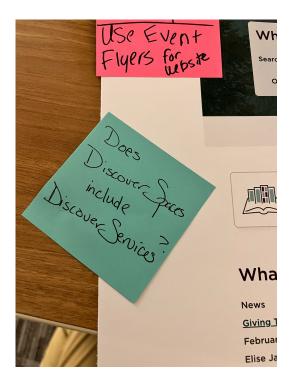
## Graffiti Walls

• A space, either on a wall or a white board where people can openly and anonymously share their feelings

• Opportunity to receive feedback quickly, passively, and anonymously

## **Graffiti Walls**





## **Graffiti Walls**

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February 23, 2023

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### **Events & Workshops**

News

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### Artist Talk with Elka Stevens

January 5, 2022

Online

Dr. Stevens scholarly interests lie at the intersections of visual and material culture, international trade, gender, and identity, Dr. Stevens uses textiles and clothing as a lens of analysis...

Muslim Journeys: An Early Modern Anglo-Muslim Archive: Cross-Cultura **Encounters and Identity Formations** 

January 5, 2022 MSU Libraries, Green Room

Drawing on selected pre-1800 archival materials from the Stephen O. Murray and Keelung Hong Special Collections...

### Introduction to ESRI StoryMaps and StoryMaps JS

January 5, 2022 MSU Libraries, Digital Scholarship Lab

Both ESRI and Knight Labs Story Maps combine narrative text. images and other content with maps allowing for the creation of





Service description, you can get passports at the MSU Libraries! Visit lib.msu.edu/passports for more information and to make an appointment



- Identified an alternative layout to the bento-box and developed it on a test server.
- Our plan was to observe participants performing the same task on both layouts.

• Participants include a mixed pool of students, faculty, and community members.

• Documented qualitative data & quantitative when participants were performing the tasks.

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All Sources 10000+	No results found for Michigan		Results from the C	atalog, Articles, Databases, Online Journals	, and Guides and more.
Books & Media			Books & Media	Journal Articles	Databases
Journal Articles	Journal Articles		More than 100 results found within the MSU Library catalog.	More than 100 results found within journals, magazines & conference	More than 100 results found within MSU Library databases.
1000+ Databases	Michigan.		Linked Data [electronic resource] Storing, Querying, and Reasoning /	proceedings. A synthetic Data Generator for Smart	China Data Online
41	Corporation for National and Community Service (U.S.)		by Sherif Sakr, Marcin Wylot, Raghava Mutharaju, Danh Le Ph	Grids based on the Variational- Autoencoder Technique and Linked	DOE Data Explorer
Research & Course	Call Number         Status         Library Location           Y 3.N 21/29-20/M 59/         Multi 1         MSU Government Documents Online Resource	JL	Sakr, Sherif, author; Wylot, Marcin, author et al.	Data Paradigm Santos, Ricardo Dos;	Data Citation Index

"Honestly I did not even notice the sidebar"

"I don't need 1000's of results in the side panel"

"I prefer the top panel. The counts are not giving me any useful info"

"The counts might be useful now that I know what they mean"

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All Sources   Books & Media   Journal A	rticles   Databases   Research & Co	urse Guides   Course Reserves   Our Website
<b>Books &amp; Media</b> More than 1000 results found within the MSU Library catalog.	Journal Articles More than 1000 results found within journals, magazines & conference	Databases Approximately 41 results found within MSU Library databases.
Hemingway in Michigan, Michigan in Hemingway : an exhibition in the Francis and Mary Lois Molson Exhibit	proceedings. Michigan. Corporation for National and	Map Michigan Michigan Legislature

## **Next Steps**

### Next up...

- Content migration (in progress)
- Continue branch library page customization(s)
- Testing, testing, testing!

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