

# XR Library Playbook: Best practices for successful XR program integration

An Infopeople Webinar  
August 21, 2019

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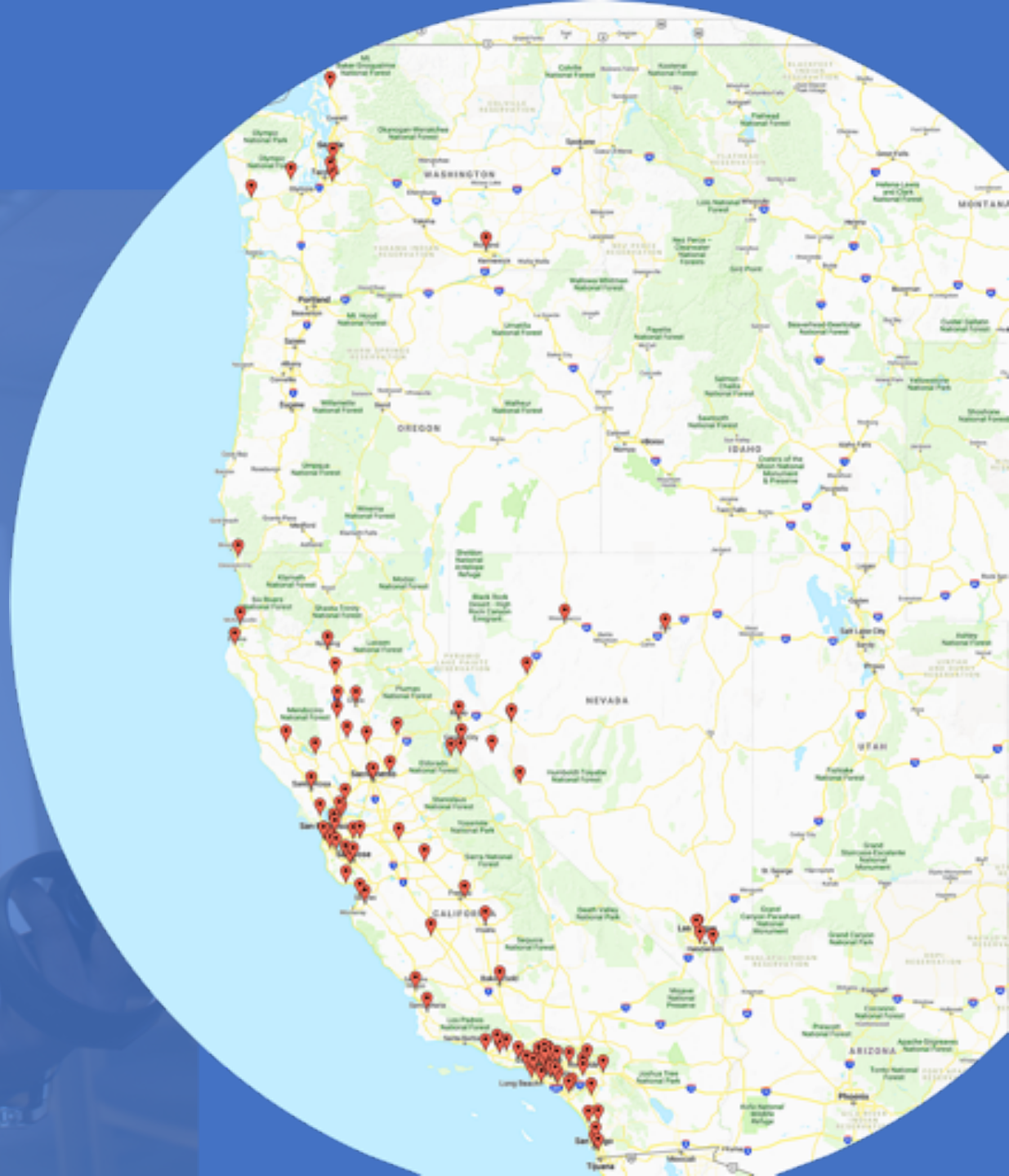
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- VR Pilot Installations
- California 2016 -2019
- 100 libraries  
300 systems
- Nevada 2018- 2019
- 20 libraries
- Washington 2018- 2019
- 20 libraries

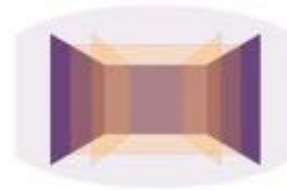






### VIRTUAL REALITY (VR)

Fully artificial environment



Full immersion in virtual environment



### AUGMENTED REALITY (AR)

Virtual objects overlaid on real-world environment



The real world enhanced with digital objects



### MIXED REALITY (MR)

Virtual environment combined with real world



Interact with both the real world and the virtual environment



# Nevada XR Library Pioneers

## Emerging Technology Early Adaptor Program



In a year-long pilot program, emerging technology takes center stage in 15 Nevada libraries and the Fleischmann Planetarium.



### Nevada XR Library Locations

Best Buy Teen Tech Center —  
Las Vegas-Clark County Library District  
Boulder City Library  
Carson City Library  
Churchill County High School Library  
Churchill County Library  
Douglas County Library System  
Elko/Lander/Eureka County Library System  
Fleischmann Planetarium — Univ of Nevada Reno  
Henderson Libraries  
Humboldt County Library  
Lyon County Library System  
Mineral County Library  
North Las Vegas Library District  
Pershing County High School Library  
Washoe County Library System  
West Las Vegas Branch Library —  
Las Vegas-Clark County Library District



The Nevada State Library is leading statewide workforce development in Nevada's priority industries for in-demand occupations.

- Nevada Career Explorer career database
- 360 video from XR Libraries
- Focused virtual and augmented reality experiences
- STEAM and course lesson enrichment modules





# XR Pilot Phase 1 by the numbers

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- 10 months
- 15 libraries + 1 planetarium
- At least 1,600 patrons engaged
- Over half (56%) came to the library for VR
- 95% felt they had learned something
- 96% were more likely to attend a similar library program
- 91% were more likely to use other library services or resources



# Libraries = Education by the numbers

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- 13 libraries
- 309 students
- 86% said using VR increased their engagement
- 80% said using VR increased their curiosity
- 83% said using VR increased their understanding
- 83% said it could help them prepare for a job
- 93% wanted to see more VR in the library
- 78% said they'd visit the library more if VR was available





# Libraries = Education

## Key Conclusions

- Xtended Reality programs provide measurable benefits to youth and adult learners on outcomes directly related to classroom instruction
- Xtended Reality programs can demonstrably improve student engagement
- Program quality and intentionality influence outcomes





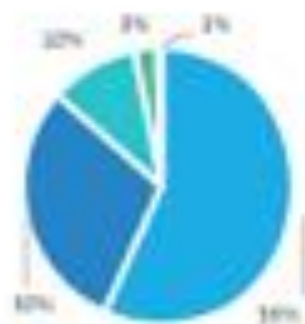
## Timeline 2018-19



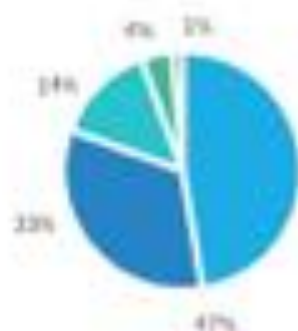


# Libraries = Education data (n=309)

56% said VR increased topic engagement.



47% said VR increased topic curiosity.



83% said VR helped understanding.



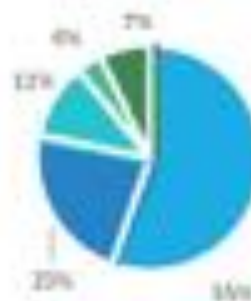
93% would like to see more VR in the library.



83% think VR can help prepare for a job?

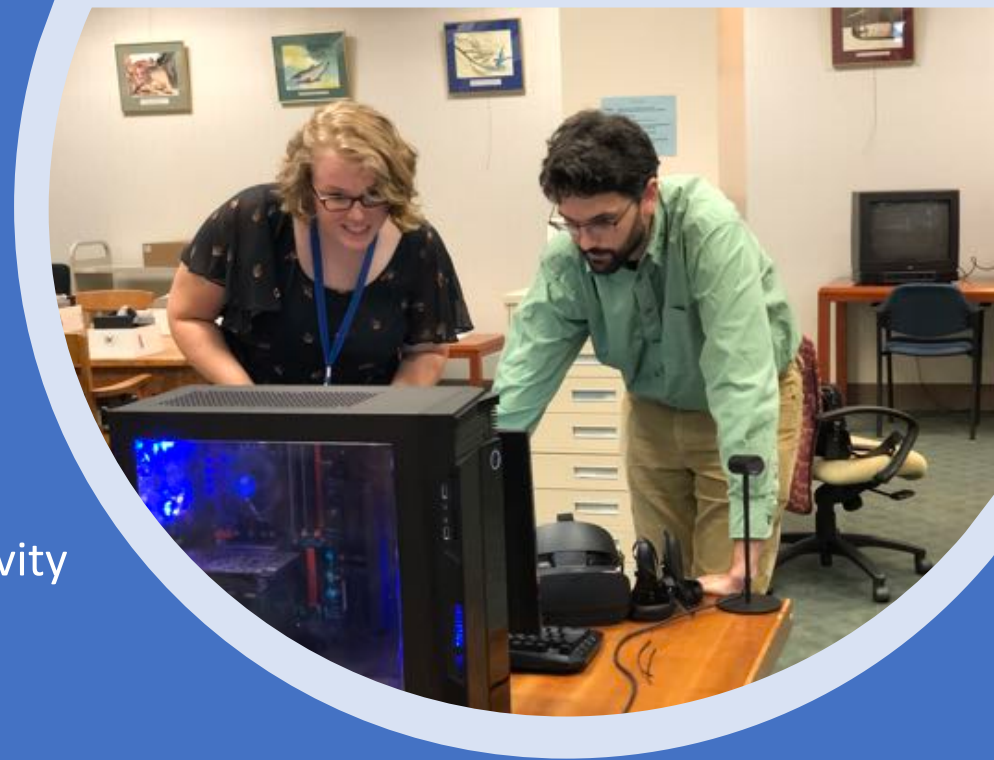


78% would visit the library more if VR was available.



# Nevada State Library

- **Walk-in sessions began in February 2019.**
- **One walk-in cancer patient used VR to visualize healthy lungs.**
- Utilized an educational virtual reality experience as a tool for sensitivity training for both Talking Books staff and volunteers.
- Some selected quotes from participants:
- “The emotional impact is inescapable.”
- “Gave me a great understanding of the world of sound to a blind person.”
- “[The use of VR] was a wonderful experience and I am (at 84 years old) an enthusiastic supporter.”
- “Easier to more fully experience embodiment and my own sense of presence.”
- “Provides similitudes to those with less sight.”





# Mineral County Library

- Created XR Club for young VR enthusiasts to gather weekly. The adult leaders of the group make sure the social experiences are fun, controlled, and safe for the young patrons.
- 114 patrons – the majority of VR participants at Mineral County
- 89% learned something new.
- 89% felt confident about using what they learned in VR
- 94% likely apply what they've learned and more likely to attend a similar library program
- 87% will use other library services or resources



# West Las Vegas

- Began hosting drop-in VR events in March 2019
- Youth Services Department Head Marco Veyna-Reyes began offering drop-in opportunities during other teen events, encouraging users to try out VR for 15 minutes at a time.
- In May, the library shifted VR programming to Tuesdays to help coordinate with other STEAM related programming in the Youth Services Department.
- Teens at the West Las Vegas Library now have near daily access to education STEAM learning opportunities.
- 87% of VR participants learned something new.
- 90% Felt confident about using what they learned in VR.
- 85% are more likely to attend a similar library program.
- 74% will use other library services or resources.



# Churchill County High School Library

- Using Lifeliqe and Anatomy VR programs, students manipulated a skeleton in virtual reality, and tried to name each bone, as they removed it from the virtual skeleton.
- Students were more engaged and wanted to learn more about the individual bones and how they fit together.
- Comments from students:
- “Virtual reality made it way more enjoyable to go to the library.”
- “This helped me to understand my topic better than just reading a book because I was able to see each individual bone in its rightful place.”
- “[VR] was hands on and more engaging. It was like there was a real skeleton there.”







# Churchill County High School: Logan

# XR Catalog Hackathon

- State Library co-led a virtual reality cataloging hackathon with librarians to create virtual reality records.
- Held on June 13<sup>th</sup> at the Nevada State Library in Carson City, and XRMarin at the California South Novato Library, with remote access for other librarians.
- Hackathon created 395 new catalog records, and made history as the first VR cataloging hackathon.





*XR Virtualized  
Elevate Learning,  
Inspire Discover,  
Increase Equity*







**Magic Planet VR Sphere**



**Virtual Sandbox**

**EXPLORE**



**UNDERGROUND ENGINE  
PRIMORDIAL SOUP**




**Immersive**


# XR Creators Augmented Reality


**AR** offers libraries entry level experiences for everyone with a cell-phone.  
We have Step-by-step lesson plans for creating fun interactive mazes.




## AUGMENTED REALITY SCAVENGER HUNT


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1 To play **DOWNLOAD** the XR-Learn app from the Google Play or Apple App store.
- 



2 After you've opened the APP, locate the first **CLUE** by pointing your phone at the poster next to this guide.
- 

3 What do you see? An augmented image will appear, now use this image to think about where the next **POSTER** might be.




A Cow?  
Maybe the next poster is near animals?
- 

4 There are six poster locations total. Once your phone locates a target, it **Automatically** saves it to your phone.


- 

5 Once you've found the last poster you'll be notified to return here at the start booth. We will then enter your name into a raffle for a chance to **WIN** a special prize. Good luck and happy hunting!





# XR Creators Virtual Reality

VR is **immersive** with our Unity based lesson plans for creating virtual rooms with interactive elements.





# XR Creators: Immersive Storytelling

**360VR Cinema** simulates a user's presence and environment in a 360° video.





# COMMUNITY VR EXPERIENCES

- Creates a platform for Libraries to interact with each other in real-time in VR
- Customizable avatars
- Share Videos and photos from your desktop, play games, draw virtual 3D images



# EXPERIENCE YOUR NATIONAL PARKS

IN AMAZING  
**VIRTUAL REALITY**

## VR PLAYBOOK — NATIONAL PARKS

### Programs



#### "NIGHT SKY OVER JOSHUA TREE NATIONAL PARK"

Bask in the spectacular vistas of Joshua Tree National Park in California and the night sky ablaze with stars. See the rock formations as you've never seen them before: in spectacular 360-degree time lapse.

RT: 2:41 mins | Available on: National Geographic



#### "SOAR ABOVE BRYCE CANYON"

Marvel at nature's handiwork at Bryce Canyon National Park as you take a breathtaking aerial ride across Bryce Canyon's red-orange-pink amphitheaters.

RT: 2:41 | Available on: National Geographic



#### BEARS EARS NATIONAL MONUMENT

Bears Ears is a desert landscape of immeasurable cultural value revered by its indigenous people. Explore the culture including the sacred kiva ceremony, the four-story dwelling and rock paintings among other archeological treasures.



#### "YOSEMITE WITH PRESIDENT OBAMA"

Tour Yosemite National Park with President Obama as he honors the legacy of our country's national parks. Be in the company of the president and his family, as they visit the breathtaking landscapes of Yosemite.

RT: 11:02 | Available on: Oculus Videos



#### "AS IT IS: A GRAND CANYON VR DOCUMENTARY"

More than 100 years ago, President Theodore Roosevelt asked us to leave the Grand Canyon "as it is." Journey down the Colorado River to see the Grand Canyon as too few do, from the bottom up. Run its biggest rapids, explore its slot canyons, and meet the Navajo and Hopi activists working to protect sacred sites.

RT: 17:05 | Available on: Littlstar



#### "VIRTUAL YELLOWSTONE"

National Geographic takes you on a tour of Yellowstone to see all the famous sights from Lamar Valley and bison to Old Faithful and Mammoth Hot Springs.

RT: 6:45 | Available on: Littlstar



#### "AMERICA'S BEST IDEA"

Step inside Jonathan Irish's favorite natural places in America. Take a deep breath & look around as you catch a glimpse of Zion, Redwood, Acadia & Grand Canyon National Parks.

RT: 2:04 | Available on: Discovery VR

# XR PLAYBOOKS

A collection of lesson plans, activities and discussion themes to engage users to share their immersive experiences with each other.

The Hydrous presents **IMMERSE**  
*A Journey of Science, Love & Magic in the Ocean.*



**IMMERSE ► UNDERSTAND ► ACT**



# XR-learn

## Build collections with VIVE Portal

Offers a new approach to learning  
traditional subject matter

- Scheduled webinars
- List of Curated Educational Titles
- Community forum page
- Online Classes
- ALL Titles come with lesson plans



Show more



Show more



# XRSTARS







# *XR Community Outreach & Partnerships*

- Libraries help people experience XR
- Existing library events and programming
- Tech, MAKERSPACE or STEAM programs
- Adult VR Days
- Bookmobiles
- Partnerships promote XR
- Schools / teachers
- Senior Centers
- Parks and Rec
- Local Museums