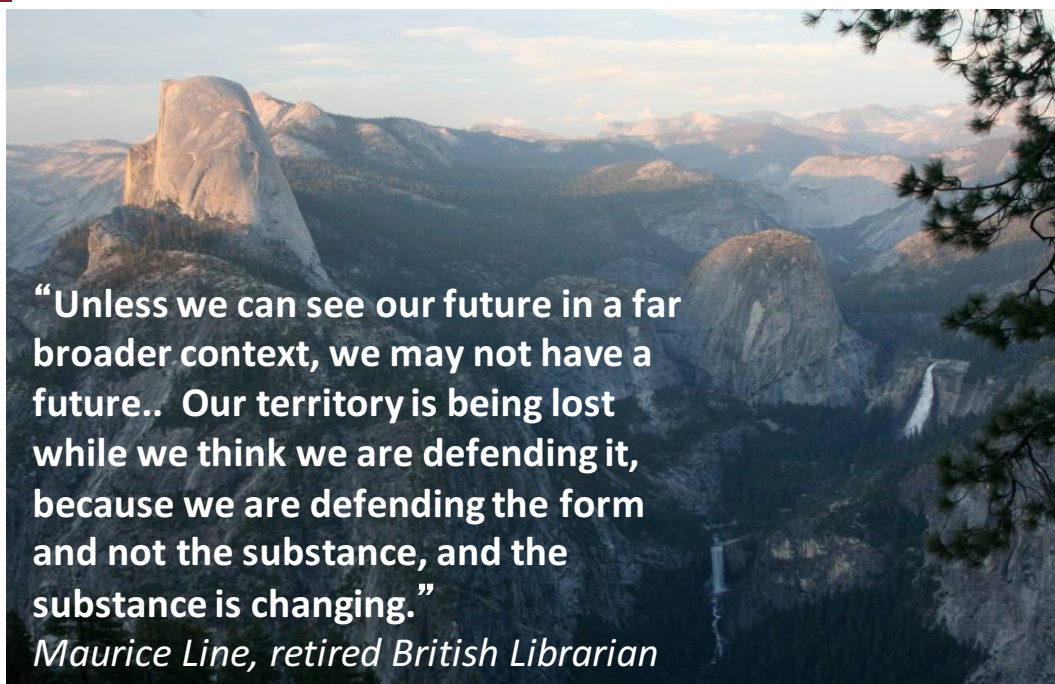


## Thoughts on the Need for Continuous Learning and Re-Skilling in Librarianship Carl Grant, Dean (Interim) of Libraries, University of Oklahoma

The University of Oklahoma is an R1 research institution and the largest university in the state of Oklahoma. It features large collections of materials and special collections. In 2013, a new Dean was hired and charged with bringing the library up-to-date. This talk is about what has been done, in the last five years to achieve that.

Now one thing we all know about academia, and that it reflects the human species and thus does not readily embrace change. Change is somewhat threatening; it leaves us feeling insecure. We're not always certain where we're going to fit in or what it will mean for us personally. As a result, we prefer to see change happen gradually. However, there's a danger in that approach best captured in this quote from Maurice Line, a retired British librarian:

### The kind of change preferred in academia



I think that's a quote that we all should print out and hang on a wall. Because I think we are often guilty of this -- trying to defend the form while the substance is rapidly changing. We have to think about how we can change that tendency going forward. We need to ask ourselves; why does that happen and how do we break out of it?

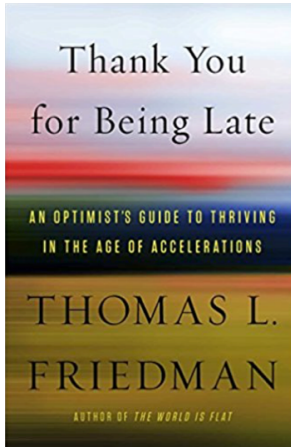
## ***Types of Change***

I think the book, ***Machine Platform Crowd: Harnessing our Digital Future*** by Andrew McAfee and Erik Brynjolfsson (W.W. Norton, 2017), includes an interesting quote. It asks, “Why are technology progressions so obvious in retrospect, and hard to see while they are unfolding?” The authors suggest that it is because we become so proficient and knowledgeable about the status quo that we’re unable to see the progression. “it’s called the curse of knowledge,” a place where we ignore certain realities.

The book, ***The Inevitable*** by Kevin Kelly (Viking Press, 2016), which I’ll talk about again in a moment. points out that every 12 months, we’re producing 8 million new songs, 2 million new books, 16,000 new films, 30 billion blog posts, 182 billion tweets and 400,000 new products. Clearly, that’s a lot. It’s coming down the pipes at us and we’re supposed to be competently dealing with it.

Thomas Friedman in his book, ***Thank you for Being Late***, (Farrar, Straus and Giroux, 2016), had a wonderful section where he talks about when we really experienced this huge leap in history. According to him, in and around 2007, all the products listed on this slide, were introduced to society. We’ve been dealing with the impact ever since. These products have transformed our world in ways, that at the time. I doubt we could imagine. Friedman, calls it “one of the greatest leaps in history.”

## The kind of change the world is experiencing



### What happened around 2007?

- iPhone
- Hadoop (big data)
- GitHub
- Facebook (Sept 2006)
- Twitter
- Google bought YouTube (2006)
- Android launched
- Kindle released
- IBM released Watson
- Intel released high-k-metal gate microchips

**“One of the greatest leaps in history”**



UNIVERSITY LIBRARIES  
The UNIVERSITY of OKLAHOMA

Intellectual Crossroads of the University

In another book which has been very popular, *Homo Deus: A Brief History of Tomorrow*, (Harper, 2017), Yuval Noah Harari said you must realize that scientific research and technological developments are moving so fast that we just can't grasp it anymore. It's going on around us constantly and it's redefining our world. It becomes very hard to keep up with all of this.

Again, going back to Kevin Kelly's book, *The Inevitable: Understanding the 12 Technological Forces That Will Shape Our Future* (and if you haven't read this book you should., In my mind every librarian should read this book!) it identifies 12 ongoing technological forces, not specific details about technology, but the trends behind those details. It's a transformative read for a librarian to go through this and understand the 12 trends. This slide lists the 12 trends that he has identified:

## The kind of change the world is experiencing

### The 12 technological forces at work:

- 
1. Becoming
  2. Cognifying
  3. Flowing
  4. Screening
  5. Accessing
  6. Sharing
  7. Filtering
  8. Remixing
  9. Interacting
  10. Tracking
  11. Questioning
  12. Beginning

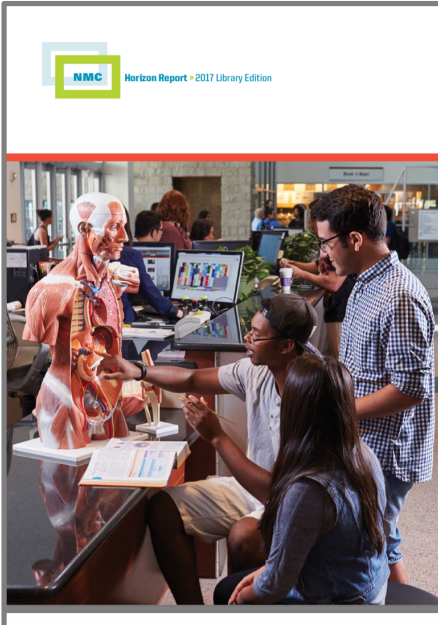
This list is fascinating and as you go through it and think about the effects each one will have on librarianship, it's a very enlightening experience. What is more remarkable is that you'll realize these things are happening around us right now.

Often, I think one of the things we're guilty of in libraries, and certainly I thought we were a bit guilty of it when I got to the University of Oklahoma Libraries, is that we tend to be introspective in observing trends. We tend to look Internally and, maybe we look across the state, or maybe a state or two beyond, to see what's going on. But really, we need to have a *much* wider perspective -- we need to be paying attention to the things that are going on globally. We need to be paying attention to technology. We need to be paying attention to the sociological trends and certainly to the trends in education.

When one does that, it's obvious there's plenty of cause for concern. There are also plenty of reasons for us to know that there's a future role for us as librarians when we do that. But we can't sit and let the trends turn into movements that will run over us. We need to be active and we need to address a lot of those concerns.

I think we all enjoy reading the New Horizon Report, when it is issued, and I believe it's under new ownership now. I believe EDUCAUSE has picked it up. The last one talked about some of the major trends we're seeing out there.

## The kind of change the world is experiencing



<http://cdn.nmc.org/media/2017-nmc-horizon-report-library-EN.pdf>

“Movements in academic and research libraries, especially in the context of higher education as a whole:

- Expanding Access and Convenience
- Spurring Innovation
- Fostering Authentic Learning and Discovery
- Balancing Societal Shifts
- Tracking Research and Patron Data
- Spreading Digital Fluency



UNIVERSITY LIBRARIES  
The UNIVERSITY of OKLAHOMA

Intellectual Crossroads of the University

Obviously, expanding access and convenience is becoming so important. Spurring innovation and many times I find librarians say: “Well, that belongs someplace else, not necessarily in the library.” I wholeheartedly disagree with that. I think helping to drive innovation does belong in the library.

### Libraries, You and Continuous Learning

One of the things that I've know I've heard Karen and others say is that we try to position our libraries as the hub of the campus. We make the point to people that we are kind of the Switzerland of the campus. When technology or new Ideas or new programs can be introduced here at the University of Oklahoma, we introduce them to all thirteen of our colleges. They all get a chance to work with it and to work with us to see does it make sense to bring it into their college. And if so, then we can help them do that or connect them with resources that help them to do that.

I think we are the ideal testing lab for the campus. Particularly as many universities face budget cuts it makes so much sense to try things out in the library. If they work there, then they can be deployed out to the colleges. We're well positioned to do that and I think we should do that. We can introduce the change and surround people with all the information and resources they need to do understand and deal with the impact. We can also connect them to other people and other colleges doing the same things. It is a distinct collaborative role that we have and should hold dear to our hearts, because it puts us in a really, really important and valued spot within the university.

Obviously, something else we need to continue fostering is learning and discovery. As a result of our being well connected across the campus, we're in a good spot to spot and deal with large societal shifts and we certainly know we're dealing with a lot of societal shifts at this moment in time, things like economic divisions, race and sexual divisions, facts vs. alternative facts and the continuing discounting of the scientific method. Again, we can deal with this in a collaborative and coordinated role. You may see the various colleges on campus doing elements of dealing with something that needs to be addressed, but the library can be the place -- the umbrella -- where it all comes together for all of the community. The library can be where it's brought forward to the entire campus. We can be the ones to connect them with those things and help everybody benefit as a result.

We've heard a lot of talk today about research and patron data and what's involved; and it's important to note this is complex beyond belief. And for good reason. There are many issues involved and we all need to be very concerned about them and pay close attention to the topics, but bottom line; we need to be involved! We have to be a player at the table in discussing these issues. I think we have plenty to add to those discussions. We have to make sure we're part of them.

Spreading digital fluency, of course, is becoming more important. As we look across society, we see the digital layer being put on top of citizenship, the university, news and media. We need to teach people how to deal with that digital layer and to understand how it can be subverted, how it can be twisted, how it can be used to benefit others, beyond us. That's a role we as librarians should own and should perform on our campuses and maybe even beyond our campuses.

Another great book that's out there is David Lewis's book, *Reimagining the Academic Library* (Rowman & Littlefield, 2016). He identifies a number of steps in the book, which he believes academic libraries should take to be prepared for the future. This slide shows his 12 points.

## Libraries, you and continuous learning

Steps to achieving the reimagined academic library:



1. "Retire the legacy print collection now.
2. Develop a space plan.
3. Manage the transition from traditional publishing models to open access.
4. Support the creation of, access to and preservation of the scholarly content on your campus.
5. Commit to the special collections your library will support and make the required investments.
6. Infuse the curriculum with the skills necessary to create and consume information productively.
7. Understand the demographics of your organization and have a plan to hire or develop the expertise the library will need.
8. Get the culture right
9. Support the development and sustainability of network level tools and services
10. Sell the change."

We do need to realize that in some respects, the print collection is losing out to other methods of access. It's not going to go away and it's not disappearing, but people increasingly want digital information. That has an impact our space planning for people and collections. Which means we need a space plan for our collections. It's something many of us are wrestling with. It's not cheap to do and so universities are wrestling with the cost question. Plus, questions about the benefits of that plan. At the same time, we've got to manage the transition from the traditional publishing models to the Open Access model. Open Educational Resources (OER) are also part of this. We've been doing a lot of work in this area on our campus and having some very good success with it, but it's a slow process. Again, you're asking people to change and adapt to new things.

Other challenges we face are obviously, related to the problems we're seeing with big serials packages and we need to do even more to get this situation under control. There's some interesting ideas out there being discussed currently, but again we have to make sure we're part of those discussions.

We still face major challenges about our role in preserving and ensuring access to all of the scholarly output that's created in our communities and on our campuses. It's no small task, but it's one for which we desperately need to provide some solid, scalable and affordable answers.

Our special collections, which many libraries have, are incredibly valuable investments and leveraging those and working collaboratively across our profession to bring them together for the benefit of our end users is another important task for us to undertake. We've need to work with our faculty to help infuse the curriculum with the skills to use these collections and information productively.

At the University of Oklahoma, we have started up something that we're going to kick off in January, called the Digital Skills Hub where we're trying to teach these, and other types of digital skills – things one needs to know about virtual reality, 3D printing, blockchain, algorithms and artificial intelligence. We can teach our communities what they need to know in order to both use the technologies but also to use them well and wisely.

### **Developing Your Team**

I think it's always a challenge trying to figure out how you'll develop your team. To do that you have to know the people and skills of your organization and you have to plan to hire and develop the expertise that you find don't have in place today.

As positions leave or depart, we should ask; can we change the job and redefine it? A lot of times, that can be seen as very threatening. So we have to work with our teams. It's all part of getting the culture right. We have to create a culture that that allows it to happen and that people can feel comfortable in. And we can get the culture right in our libraries and still have it changed by larger forces on the campus. So, that can be a challenge that we have to deal with.

Of course, we're always trying to do scalability and sustainability of our tools that we build so they'll work across our profession. That's not easy. There are lots of challenges because everybody tends to want to operate according to the unique needs of their campus and the strategic plan of they operate under.

How do we, at the same time, support the community's desired goals? Particularly when you've got a Provost or President standing there saying, *No, I want you to do this and not that!* It can be very challenging and tough to do. Of course, part of the job all the time is to sell the change out to the campus. You've heard a couple of earlier speakers say: *"You know, we're all in this role, we have to be selling what it is we're trying to do."* I agree. Everybody, from top to bottom, has to understand why our ideas are needed, and how we're going to get there.

Furthermore, the reality is, that as a result of the accelerations we discussed earlier being set loose, and as stated in this **New York Times** article, they're creating a world where every job is now requiring lifelong learning,





## Libraries, you and continuous learning



“Accelerations set loose by Silicon Valley in technology and digital globalization have created a world where every decent job demands more skill, and now, lifelong learning.”

**The New York Times**

Thomas Friedman, *Owning your own future*. NY Times, May 10, 2017

<https://www.nytimes.com/2017/05/10/opinion/owning-your-own-future.html>



Intellectual Crossroads of the University

This is something that we have to build into our culture. We have to help our people understand how they can continue to learn and give them the opportunity to do so. Plus, I believe Libraries can serve as a connection point for alumni when they leave the university, to engage in lifelong learning. Maybe those are people will then become donors. We need to be creative in how we approach this.

I think one of the problems we see is a result of all the change in society at large is the reaction to that *pace* of change. It's almost as if now there's a swing back to the old days as opposed to the forward thinking of a few years back. We're seeing tribalism, financial disparity is getting way, way, way out of whack. We're dealing with twisted stories and facts, ignorance, sexism, racism and more. We're seeing resentment build up as a result of all those things. The bottom line, for me, is that what we have to be concerned about is the undermining of trust, truth, the scientific method, intellectual and basic civil discourse and debate. All are being torn apart before our eyes and that's simply not acceptable. We can't allow that to happen. We've got to factor how we address these things into our training, skills development, technology and how we plan our spaces. If we don't, everything we do in terms of supporting higher education, research and learning can literally be undermined by those activities. As I watch people talk about their strategic plans and their ideas for the future, they seem to be ignoring those

realities. Those strategic plans won't mean a thing if we let all of what I just listed be undermined. It is deeply concerning. I think, as a profession, we need to deal with this.

## Libraries, you and continuous learning

### The result of all this change – cont'd?

- Libraries need to factor these realities into their team training, skills, technology and space planning.
- Why?
  - Because *all of the above* are essential to support higher education, research and learning.

How do we do this? It's a fair question. The obvious answer is not unlike what Karen said. She phrased it as curiosity being the key. I would say something similar; we need to teach people to question *everything*. Questioning is at the heart of invention and genius. To keep asking, why are we doing it that way? You know, when our children are young they all drive us nuts asking why? So many times, we just answer with "Because", but it's the absolutely the wrong answer, because we breed out of them the desire to question, and to learn how things come together and why they are the way they are. As librarians, we have to be applying questioning all over the place. You know, we've seen some excellent examples today in this webinar.

Question the space, how does it work? Is it portable? Is it inviting? Is it comfortable? Does it support collaboration? Do we support an environment where people can come together and converse with one another in intellectual ways? Is it easily reconfigurable? Can we make it adapt to the needs of the moment?

## Libraries, you and continuous learning

Question space. How does it support:

- Being inviting, comfortable?
- Collaboration?
- Re-configurability?
- Technology?
- Offering differing styles of seating (with various levels of privacy)?



When it comes to technology -- does our space support differing technologies and all the different ways that we're seeing it rolled out? Does the space have enough outlets? Does it support the wireless that we need? Does it support the video needs that are out there? These are things that I think we have to always be thinking about. A lot of times people just say, we can't afford that. We can't leave it at that. One of the things I've certainly learned, is that many times when you take on these tough questions and you come up with the answers, it brings attention to you and it brings dollars to you. It can be through your university or it can be through grants, it can be through donors, but people began to see that you're setting a new course and you're marching in a new direction. And they then may start getting behind it. And that is one way that I think you can you can definitely set yourself apart from the crowd and try and make these things happen in your communities.

I think it's also important as you're doing all this to remember that people are very different. We have to offer many different styles of seating, and we have different levels of expectations in other areas that we need to meet. Certainly, you know, we're dealing with students at one level of expectations and we're dealing with faculty at another and we're dealing with grad students and staff, all with different expectations. So having something that appeals to all of them is part of the questioning we need to be doing when we're thinking about space.

## Libraries, you and continuous learning

### Question space.

Lower Level 2 – Conference Room,  
Zarrow Family Faculty and Graduate Student Center



This slide shows another space that we recently redesigned and implemented which was formerly our cataloging and materials processing unit. The people that were housed here have moved off to our library service center now and we created a new faculty and graduate student center and it's very attractive and a very nice place for people to get together and read and consume information and converse about it. These are the kinds of spaces I think, that help redefine a library and what it is within the community it serves.

Let me show you a couple more examples of that.

## Libraries, you and continuous learning

### Question space

Learning Lab: Lower Level 1, 1958 Building

The "before" pictures



This was our space that now is a learning lab, but this is what it looked like before very traditional. Now it looks like this.

## Libraries, you and continuous learning

### Question space

Learning Lab: Lower Level 1, 1958 Building  
The "after" pictures



 UNIVERSITY LIBRARIES  
At the UNIVERSITY of OKLAHOMA

Intellectual Crossroads of the University

You know where we've put in here is what the students call first class seating, those Brody's there in the bottom right of the slide. What we did was change the colors, put in carpeting, put in all kinds of reconfigurable furniture, put it in a spot where they can get help from the writing center, the tutoring center and a librarian. These redefined spaces can help to redefine expectations of the library.

Here's another space where we've we've done some work in our Graduate Center.

## Libraries, you and continuous learning

Question space.  
Lower Level 2 – Reading Room,  
Zarrow Family Faculty and Graduate Student Center



**Before**



**After**

Again, this used to house our serials processing unit. Now it has been turned into this reading area for the graduate students and most days this space will be totally filled up. It's very, very popular.

## Libraries, you and continuous learning

### Question space



 UNIVERSITY LIBRARIES  
at the UNIVERSITY of OKLAHOMA

Intellectual Crossroads of the University

In the slide above, we took the student workers' break room and redefined it into what we call the "Innovation @ the Edge", which is where we do Virtual Reality, microprocessors and 3D work and printing as well as the Carpentries which you've heard mentioned -- all of this is done out of this space. The bottom picture is a typical day. It has become a very active center. Spaces like this underscore the message that libraries are now different. Today we put out information in many new formats that didn't exist 10 years ago. We can print them. We can visualize them. We can change around the way we visualize information and experience it. We can get inside of things that we could have never dreamed of going inside of before in order to better understand how they're put together. Virtual reality is amazing technology and we've made quite an effort to be a leader in this area. I think it's paid off for us in some really unique ways

Jeremy Ballenson's book, *Experience on Demand* (W.W. Norton, 2018) had an interesting quote. It says, VR "is an entirely new medium, with its own unique characteristics and psychological effects, and it will utterly change how we interact with the (real) world around us, and with other people."

That statement has a lot of power. One of the things we've done recently with virtual reality is where we ran a class in virtual reality across three states and seven remote locations. We brought in a remote instructor. And the reason I want to bring it up here is because it asks the question: *What does that mean for space design?* What do we need to be thinking about in the



future when we're talking about space where we can start doing things like this, using virtual reality?

## Libraries, you and continuous learning

Question the tools you use



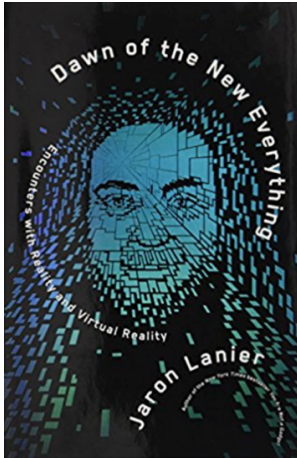
VR “is an entirely new medium, with its own unique characteristics and psychological effects, and it will utterly change how we interact with the (real) world around us, and with other people.”

*Jeremy Bailenson, Experience on Demand  
Page 11.*

We're doing a lot of work with 3D printing. We've printed things like a prosthetic hand for a child that was born with an incomplete one. Then you realize that the researchers have now managed to wire up our heads in a way that we can strap on a simple device that allows us to actually control more than just our two arms, we can control multiple arms. Which makes me think: What does that mean for space design? These are questions that I just love to dig into and think about.

I think we also need to be thinking about what the gentleman from Brandeis was just saying. We need diverse communities. It's part of the way I think we help cure some of what's going on in society at large. We need to be working with diverse groups of people. We need to be using diverse people in testing some of the new technology. There's a lot we can do there. We need to be questioning ourselves about our community outreach. Libraries again can be very insular, and it's good to reach out.

## Libraries, you and continuous learning



“Test your world with diverse people. Better yet, add diverse people to your team. Cultural background, age, sex and cognitive style have a big impact on how people take to VR.”

Page 235.

Below is a picture showing an exhibit we're running currently that was done in collaboration with our colleagues in architecture. We're running an American School of Architecture exhibit that came out of that college and we're highlighting their work because we have now inherited the archive for that school. It plays to both our and their benefit. It helps expose students to the domain of architecture, students who would not otherwise go down and walk through the College of Architecture. But because of the exhibit maybe we'll find out that they're interested in the field as a result. We're doing some things there that I think are forward thinking and help identify the library as a collaborative partner within the campus community.

## Libraries, you and continuous learning

Question your community outreach



 UNIVERSITY LIBRARIES  
at the UNIVERSITY of OKLAHOMA

Intellectual Crossroads of the University

We also did with an exhibit called Galileo's World, which brought together, virtually all of the colleges on the campus as collaborators. Many had some role in this exhibit for the celebration of the 125<sup>th</sup> anniversary of the university.

## Libraries, you and continuous learning

Question your community outreach

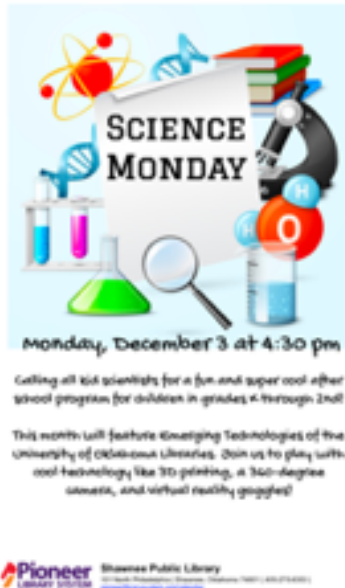


Intellectual Crossroads of the University

The slide below highlights something we did very recently. We try and do a lot of community outreach in order to help the larger community (city/state) understand the value that's created by higher education and by our library. In this case, we've gone out and helped schools by exposing their students to the 3D maker world by printing a violin for the school, so they could experience what it was like to use this kind of instrument. They had a lot of fun with it for a day.

## Libraries, you and continuous learning

Question your community outreach



Intellectual Crossroads of the University

### The need for more accessible scholarly content

Another place we're doing a lot of work is teaching people to question access containers. Open Access is an important and it's getting a lot of attention due to the price increases in journals that we're all dealing with at the moment. We've got to support this within our universities. We need to hire people that can help us support it. Grant funders want open research data. Governments want more open research data. Researchers need to be able to show greater impact. And so we've got to deal with that. Open Access is a tool in our toolbox.

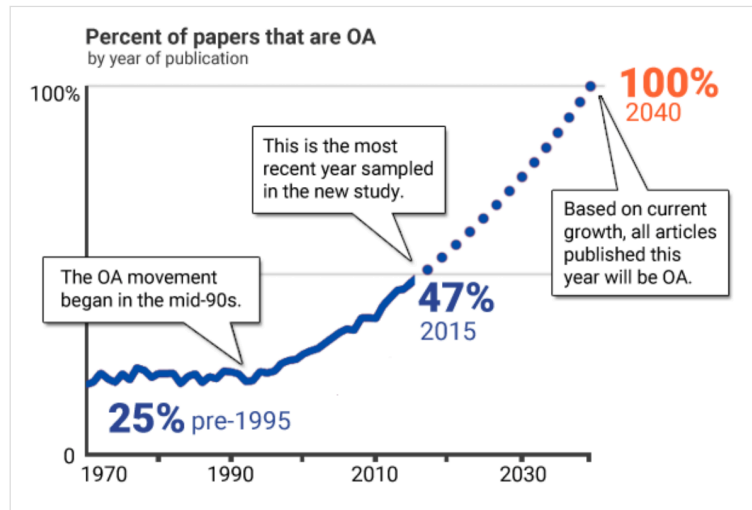
# Libraries, you and continuous learning

## Question access containers

### When will it happen?

According to this recently released, peer-reviewed study: *“The state of OA: a large scale analysis of the prevalence and impact of Open Access articles”* ... sooner than you think.

<https://peerj.com/articles/4375/>



Intellectual Crossroads of the University

The question that we're always being asked is, *okay, how do we do that and how soon is that going to happen?* You know, I don't know when it's going to happen. However, I thought this chart was interesting in that they thought it would be by the year 2040

Finally, another area where we are doing a lot of work is in the field of artificial intelligence. A lot of times people groan when I say that and mutter: “Oh my god, I'm not ready to even get near that.” But here was a chart that I found recently, and I thought was important because again it shows the wide range of industries that are starting to invest in AI. Now note, many times what is called AI is really just machine learning. But that's what's going on and so if we're preparing students to go out in the world and get jobs they need to start knowing about this technology. If we do, they're going to be in a more advantageous position. The library again is the place where we can introduce this technology and expose the colleges and their students to it.

So, to wrap up, here is my concluding slide. On it, I'm listing a summary of what I think we need to do.

## Conclusion

Do the following:

- Educate our current teams about
  - Basic business skills (accounting, legal, promotion, etc)
  - The changing environment & where libraries fit
  - The need for agility
  - How their jobs are going to change
  - Where they personally fit into it
  - How you're going to help them get there (training, etc)
- Create a learning culture
  - Failure, if learned from, *is* acceptable
  - Recognize and reward achievements
- Hire new people and seek:
  - Diversity of all types
  - Those hungry to learn, deep readers, those who question
  - The fearless, willing to try out new approaches



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Intellectual Crossroads of the University

One of the things I'm trying to do at OU Libraries, and that I would encourage others to do, is for us to be sure that we continue to educate our teams about basic programming and informatics skills. Somebody earlier mentioned the Carpentries recently I think it's an excellent way to do this and it's one of the things we do here at OU.

We also have a library school and I'm always encouraging them to teach some basic business skills to their students. Library students need to learn accounting, legal and promotion (marketing) basic skills before they walk into a working library environment. I know many of my friends will disagree with me on that but I'm absolutely certain they're wrong. These are job skills for the future.

Students and our colleagues have to understand agility is needed. It's essential to our future. We have to demonstrate it, live it, breathe it and show it. We need them to teach them how their jobs might change and where they might fit in. And not only where they fit in, but what are we -- as the institution -- willing to do to train them for that new job? It's part of creating a learning culture. Karen called it a learning organization. I call it a culture.

Part of that culture is to say it's ok to fail. It's okay and it's acceptable to fail as long as you learn from it. And then we have to be sure to recognize and reward achievements across the entire organization. That's also important for the cultural aspect.

As we hire new people. I think we've got to be seeking diversity, we've got to find those that are really hungry to learn. You know, I look for people that are deep readers. One of the questions I'm always asking when I'm interviewing is have they read a book lately. If so, what was it? What was it about? Because I find that the ability to do deep reading means you can really begin to dig into a subject and learn it. And that's an important skill. We've all gotten into a pattern where we want to read short, quick bites. Now, we can see the dangers that are coming from that. We need to get back to saying, "let's understand." We need to be able to acquire and consume information and really, really understand it.

I'm also always looking for people that I call fearless. They're willing to go out and try anything, to try a new idea. And you know, if it doesn't work well then, we'll do something different. But it's an important skill set and it's a good one to look for if you can. All right. I think I'm probably right there at the time marker so I'm going to wrap it up and hand it back over to Todd.

###