



Public Service Recognition Week 2019

Webinar Transcript - *Learning Ecosystem of the Future* - May 7, 2019

Presenter: Paul Jesukiewicz, Director, USALearning Knowledge Portal | 202-606-1313 | Paul.Jesukiewicz@opm.gov

Recommended Reading: Modernizing Learning ([free download](#))

Visit: <https://usalearning.gov/>

SLIDE 1:

This is Paul with OPM's USALearning. Today, we will talk about learning ecosystems in the government. I work within OPM and Human Resource Solutions under the Center for Leadership Development. I will spend few minutes giving background on USALearning then I will dive into the ecosystems.

SLIDE 2:

Two key things: We align with the President's Management Agenda with the key driver of IT Modernization. We are also aligned to the OPM strategic initiative for modernizing human capital IT and leveraging human capital analytics and research.

SLIDE 3:

Today, we will discuss the ecosystems and I will give a background on USALearning, and then we'll talk about with the ecosystem is, a system of systems. What I will get into is that most of the customers across the government and DoD are not buying one system, they are buying multiple systems and integrating those, and I will talk about how that it is brought together in an ecosystem or learning. But ultimately, that is what that entails, a system of systems. I will talk about some of our customers and what the architectural ecosystems look like.

SLIDE 4:

A quick overview on USALearning: it started out as an initiative during the Bush administration and was formerly called "Go Learn." Since then, it's been renamed USALearning, a designated shared service center and part of the HR Line of Business, or HRLOB.

We are a preferred provider for all e-learning products and services, and we provide innovative integrated technical solutions centralized around education, training and learning for the government – federal, state and local. The way we do that is in the agencies use assisted acquisition processes to help with learning, education and training requirements, and we do it in a software-as-a-service model. When you come to us, it starts with the government agreement and we provide you a service to meet your requirements, and we do that through a method of open source, commercial, governance, off the shelf and any type of solution out there.

We look to see what best meets your requirements and we are not here to force you into one system - we are agnostic on the solutions out there. But we host over 85% of the learning systems for all of government, so we have a pretty good idea of what works and doesn't. We work with you and your requirements to see what best meets those, and we have two contract vehicles that are both designated best in class by Office of Management and Budget. If you go to the acquisition gateway and try to buy e-learning, you will us listed as best in class.

SLIDE 5:

We currently support over 60 agencies and organizations, with a lot going on - not just the Department of Defense, but we support 22 cabinet-level agencies and a bunch of smaller agencies





as well. One of our systems is the Open Learning System, and we have this with almost 50 agencies, leveraging that code base and saving 30% to 40% over commercial off-the-shelf software. Again, one size doesn't fit all and we support all systems, both commercial and open source. We work with you to see what best meets your requirements, and as we get into the ecosystems, that is important because we don't buy one system - we have multiple that have to be integrated.

SLIDE 6:

The next slide talks about how we are centralizing learning and learning ecosystems government-wide. We work with our customers and their requirements and we use the center of excellence to figure out and centralize what meets those requirements.

Even though there is learning on the market, or has been an evolution in migrating away from that, and I don't know if that will happen tomorrow or 10 years from now, but there is a process where we see other technologies like LRS, learning record stores, using xAPI (Experience API) specifications to track the learner and that goes beyond just the formal learning. You get to track LMS and any shred of learning, whether formal or informal, social, mobile, gaming, AR/VR, all those activity streams are tracked and reported to the learning record store. We are centralizing that as part of the ecosystem that we see for our customers today.

I mentioned we have two contract vehicles through assisted acquisition and we try to get this data and have a transport layer and a centralized data warehouse because things like -- you are familiar with taking a course where you could use our system or you could use your system. You want to track those records. On the bottom left we have the USALearning store that tracks that learning, whether that is the simple digital bag or any type of learning or accreditation being tracked. More importantly, we put security around that where it's needed and we support software and the security environment and the FedRAMP.

SLIDE 7:

The next slide talks about the recent memorandum of agreement between OPM and DoD, where DoD is centralizing all learning requirements centralized to USALearning. We are helping them as they centralize and leverage the capabilities that are happening across government - all learning requirements.

We are the one-stop shop to use due to our volume and buying power, where we get licensing to a lower cost per user by bundling several organizations, services and Federal agencies together. We do so in a fast acquisition time cycle: instead of six months or a year or longer, we get the cycle into 30 days, 60 days - much quicker depending on the requirements. This is standardized going across the government. Now, I will start getting into the ecosystem, and the first thing I will talk about is the Department of Defense's project called the Total Learning Architecture.

SLIDE 8:

In the middle of this slide is how DoD is building their ecosystem and basically, you see the path of the military service member as they get in from recruitment all the way until they exit the military and how they will track that learner, full cycle. That learner has phases of assessments, from the time the service member enters to when their service is ending and they enter civilian life. There is a lifelong learning path and a lot of data associated with that, and this is where the ecosystem comes in because we need to integrate all those various HR-back end systems and learning systems and gaming simulation and everything that specific service member goes through. I will talk about this later, but the total learning architecture, TLA, is a big driver for the interoperability of the systems so we can make sure we track that data. The xAPI is a specification and international standard they are tracking to and following.





SLIDE 9:

With the Marine Corps' current ecosystem, everyone has an authentication as you enter the environment - whether a PIV card, two factor or single sign-on, and things like login.gov. There's multiple levels of how you authenticate and enter into the Marine Corps System. Right now, their focus is on using two-factor authentication. There hasn't been one step that has been defined across all of government or DoD - each PIO or member tracks that differently, and that is what we are trying to figure out and work with agencies on. Authentication might be different for each particular agency or organization. We are indifferent to what that is, but have to make sure to support it.

The Marine Corps ecosystem uses multiple systems, similar to what the Air Force is doing. The whole thing around the ecosystem, as I mentioned with the Adobe Experience Manager, it is acting as their Course Management System (CMS). In the middle, you've got the LMS and the LRS, and both are separate and we are supporting both of those. Ultimately, the learner record. The assessments, we use question marks right now as the engine and it drives to the left side, the analytics. They are using Adobe Connect for the collaborative running environment and there are systems that others are using. There are live or synchronous connections using some type of learning environment. The master learner records are at the bottom right and they already had the existing records system and now it's imported over to the opium learner record, the master record we are doing to support all of government DoD with.

SLIDE 10:

This is the picture of the Air Force learning services ecosystem. What the Air Force does is track their learners and putt that information into a learning record store using xAPI. The other piece is they are feeding the tracking data to USALearning so we can track both the common course catalog across the DoD, and ultimately the Federal government, and the same for the learner records. What you see is the Air Force is tracking the ecosystem. One product on the market doesn't do all this - and this is where the idea of the ecosystem comes in. What the Air Force wanted to do is to integrate all of these systems together so they talk to each other and track each other through the tracking mechanism.

In the middle where they intersect is the ALR - the learner record. What you see there is the analytics - a lot data coming in. Learning analytics and dashboards track the learner and provide the dashboard back to the user, where you can provide it to the senior levels. The other piece to this is the learner interaction services - how the learner interacts with the system - and this is with things like the interaction with assessments, knowledge management, tools and testing.

The Air Force isn't just using one assessment tool, they are using multiple. They want the ability to plug and play. Think about if you're using a particular test engine or service and you are not happy with that, how hard is that to migrate to another one? They want that flexibility to never be stuck with just one system - if a particular system isn't meeting requirements, this allows you to migrate to another system quickly. The same is true on on the right side, the learner management services - they have the learning management system and right now, they are evolving that and have a few different systems. The plan is to migrate away from the LMS and use the Experience Manager to serve up the content, and do so to using the learner record store for the Airmen's' learning record on the back-end. So, all this together outlines what the systems are - more than one, multiple systems integrated together. What the Air Force has done to make that work is use the innovative sandbox to test and develop in. Once all that is working, they migrate to production.

SLIDE 11:





In the next slide I will talk about is this book focusing just on the future of the learning ecosystem. It comes out of the initiative in DoD, and you can download it for free from the government printing office. I highly recommend it because it goes into much more detail. I was just touching the surface on ecosystems with what I started so far.

SLIDE 12:

As we look at that book, it gets into all those pieces, one on the technological side, and you have the instructional side, and you also have, as we look at the governance and policy around it, how this goes to the HR systems.

SLIDE 13:

If you scan this QR code it will take you to the download link, and there's also a link at the bottom to the bookstore.

SLIDE 14:

I will spend a minute or two on the idea of tracking and what the xAPI. OPM's USALearning has multiple customers, and we are trying to align with the total learning architecture. That is the next stage of interoperability. I was part of the content with learning management systems, and second from that, the xAPI took a different tracking because this was done almost 20 years ago. We never envisioned all the informal learning, social learning and learning outside the traditional systems. When I say traditional, I don't mean just classroom, but even online with the typical learning management system, that's traditional. How do we evolve from that? That is where xAPI specifications coming in.

xAPI basically tracks activity streams. As an example, it would say, *"Paul read a book. Paul went on a TED Talk. Paul took an assessment."* It's sort of like a noun -verb actor as tracking. Social media and Facebook and LinkedIn have those tracking specifications, and now they are now being used for learning. What we've developed was the learner record, the portfolio or training tracking system that tracks all of that learning. The way it works, as the individual or groups go through their training, whether on the LMS or through any type of learning, that data is then brought back into this thing called the Learning Record Store (LRS), which has all of the activity streams. As that data comes in, it's measured based off what that specific skill or competency or goal is.

As an example, if I went off and watched a TED Talk on leadership, I could record that and put that in, but it doesn't tell me a lot. I claimed I did it, but then it's part of a whole portfolio of everything else I've done for that competency. If I took an actual course at a university or at an institute, I can then bring those factors to assess my competency with more than a data point. I have multiple data points assigned based on if it was self-reported or done by a third party. Ultimately, what I get back, as I now have a dashboard, and I think of it like a Fitbit for learning. I have my individual dashboard for where I am, what I'm tracking to, then what my goals are, and what my gaps are.

At the higher level, the Chief Learning Officer level may want to track across all of government, and they may just look at how many people completed mandatory training. But they now have a better assessment around how many people are in government that have a specific certification or course completion, and can then pull into that dashboard and track. We currently have several customers who are moving forward with building the LRS capability using xAPI.

We are still at the beginning - just in the last year or two of picking up and now moving it from the concept to actually adoption and putting it in practice. You will see more over the next year but a lot of it happens outside government and within industry. Major institutions, Adobe and many use cases out there. You can search online to discover those that have adopted xAPI and how they use it.





Some use it for more than learning and some use it from a call center perspective. MedStar and the local series uses it to track 911 calls. It can be used for multiple things but for us, the goal is to take advantage of it from the learning perspective.

SLIDE 15: I want to point out the additional webinars this week, as you can see on the screen.

SLIDE 16 / QUESTION & ANSWER SESSION:

So, I'm going to jump to questions. Let me scroll up and we will start there and then chat over the phone, as well. I started answering one question about the learner record store. Is there anything else around that that you would like me to go into more detail?

Q1: Yes. The learning record store, it doesn't host content? It's your LMS, but does the LMS send information to the record store?

A1: That's correct. The LMS would automatically send that information over as well as other systems outside the LMS, and not everything is directly architected and connected but many systems are. As an example, I mentioned the TED Talks. We've architected that and when you are done with a YouTube or TED Talk, that data automatically transfers as other systems come online. And you are doing the same and the LMS has adopted it. I know our open source does and other commercial ones do as well and that data -- think of it as instead of the data being resident in your LMS, it sits outside the LMS. The reason we do that, there may be data for other things and you don't want your data to be held hostage in the LMS. What if you go from one LMS to the other? You want to access that data. Ultimately, that is being driven to make sure it's separate from the LMS and integrated with the LMS, but the content, not all content resides within the LMS either. That is what the Air Force is doing, and even Adobe Experience Manager has a content repository separate from the LMS. You can have your content in LMS or also separate. The beauty of doing it separately, is that when you migrate and you want to change systems and the content is for other things, it's not embedded within that LMS. Other questions on the LRS or others?

Q2: You had mentioned a feature of Adobe, can you say what that was called and what it did?

A2: The feature that Adobe is using is Adobe Experience Manager, it's the way to basically tie in communities and different services. There is a community of practice, a video service, mobile learning, course catalog, and it's all tied around the Adobe Experience Manager, which is separate from the LMS. In the Marine Corps, they have the Adobe manager on the backend, and the LMS and LRS are separate from that, but they use the Adobe manager as the integration point. That is how they track the completion, and using that system along with their assessments to import that information to the learning record store.

Q3: How is this any different? I'm a retiree from the Army, 32 years - how this is different than the joint service transfer? Currently every service member can get into that and this looks just like another digital collection. How is that different?

A3: I'm glad you brought that up because right now we are working on the next generation, if you will, joint services transcript with the forces education and training. Think of it as sort of the core of it but it's not deep enough. What I mean by that, it doesn't really have every single thing. Everything you did both while in the service as well as what you did external to the service, nights and weekends, other things you did, that was all captured, but what we are finding out is not everything is being captured. The stuff you are doing within your agency or within the service, that is formal but all of the other pieces are not. The learner record is a much more skilled profile of the individual, capturing everything.





Q4: Is that data transferable if I went to the Army and homeland and then back to the immigration or the Coast Guard or something? Is a transferable between agencies?

A4: Currently, it is not and that is what we are working on with a portal just getting launched called the DoD Career-Ready Portal. One of the first tasks is to make sure that record goes with you. Ultimately, think of it in the analogy of health records. Years ago, you couldn't access your health record, and it was held hostage by the doctor, and you needed to get it passed to the next doctor. So they came out with electronic health records and we are similar to doing that on the records side for learners. We are trying to figure out in government how to get the individual learner records accessible and transferable. Ultimately, what you want to do is make that information available so you, the individual, can make it available to employers as you exit the military, or go back into government from agency to agency.

Q5: Why don't you tie it into the OPM webpage? Even as the DOD military person, my record in 1986, my OPM file, why wouldn't you tie in the module to log in to do that?

A5: That's what we are trying to do. The new digital employee record is happening within government between OPM, OMB and the GSA, looking at what the new digital record will be. This learning record will be a piece of that and we are using xAPI as our way to integrate our data into that new digital employee record in government.

Q6: This question is about the overall services that OPM provides. Do you provide any service where an agency -- I don't know any other way to say this, but you purchase based on someone else's existing LMS and you don't have to go buy a new one and you're paying for that service?

A6: Yes, you can do that. We do have both a commercial and open source, and over 50 agencies right now are taking advantage of the open source one option...30% to 40% saved over commercial, but that doesn't meet everyone's requirements. We are trying to bundle as much as we can, where we can. As an example, if everyone on the phone tried to procure their own system, they won't get the best pricing, and they will get a range of pricing based on the specific requirements they have. If we've got five different organizations coming, it's a little tricky based on your different periods of performance and requirements. Ultimately, OPM is trying to work with USALearning to say on behalf of the government, we will buy 500,000 licenses or 1 million and bundle the requirements together. That could be the way to get the best pricing as a service, trying to do that individually.

Q7: How would you get around the process having to get into the system? Without two factor authentication or being on a government computer, you cannot get into the system. When you retire, you can't get to it.

A7: It is a standardization. Even with this, you would have to give an ability to authenticate in there. We can support any factoring of getting in on that and with authentication but it will be up to that individual security or CIO office to take on that risk if they are willing to do that, depending on what that risk is.

PRESENTER: I'm curious to see who on the phone is adopting xAPI? Does anybody have experience with that? If anybody's interested in more of a demo, we can go into that, we can show some of the dashboards that customers are key hurriedly using, such as the Navy and you can take a look at it. This is more than just your standard LMS, it goes way beyond to capture data and track all aspects of learning. The question is, what do you do with all that data? That's where the analytics come. Where do you want to track and how much do you want to track and do you care how much time the individuals spent? In some cases, you do. Is there certain questions and problems that are





trending that you could use with data you didn't have before to start doing more analytics around that data?

Q8: All the analytics data, you are talking multiple, where will it be stored and housed?

A8: Yes. It depends. We currently have ours up and running in our environment. In the case of the Navy, we support theirs and our environment as well, and they can be put in different environments. The idea is you are not showing content. Don't think of it as gigabytes of content. The activity stream is just a statement. We are seeing millions and millions of statements come through right now. There's been no problem with that. If you have the statements coming in, it's not really taking up much bandwidth at all, and we can certainly show that. We can show you that in a demonstration and show the statements being tracked. It's very low bandwidth.

Q9: Is this taking all the records of service members and incorporating them into the legacy stuff?

A9: Yes, that's correct. For right now, we didn't want to deprecate existing systems because they are in place and working. We need to pull the record and have it accessible outside of that. That's what we are trying to do with unified learner records, to do that across not just all of DoD, but all of government.

Q10: How is data fed to the other?

A10: Just like we are doing now, you can record it and they have different sessions depending on the tools you are using and they take that tracking data, depending on how they use it and it does tie into the analytics applied to it. If I'm launching a course and have a live instructor doing it, depending on how they are recording it, and what questions are asked, or how that is done. Within OPM, the Federal executive Institute is currently doing that with the Leadership for a Democratic Society course. It's not just the traditional classroom style, but they use collaborative learning environment to capture that information and put that through the tracking.

Q11: It's not happening automatically? Somebody has to go in?

A11: Yes. Some of it is automated, but the majority is still in that process, depending what the tool is. I can tell you how many users, if there were questions asked, and if they did so within the Adobe Connect session. Adobe already integrated the API specification within the product, and it has the connection, and ultimately, at some point, most of that will be automated.

Q12: FEMA has its own site and there are classes we've had to take, 100, 200 and I've got 56 credentials but if I didn't have my own transcript and on my certificates for DHS from the DoD, is there any thought in trying to pick up the records of FEMA in the whole process?

A12: Absolutely. A critical component is making sure those records are being authenticated and tracked and portable across the different domains. The slide I have up right now is a graphic of the Navy, the Naval training Center LRS and this is just one of their dashboards. They are tracking down to the individual, and in this case, you can see one of the users, "Sarah," third from the bottom -- she didn't do three of the first modules, and did the fourth, and then tried to take the assessment at the end and didn't pass. You can track just like LMS, but I can now pull in other factors as well. So here, they are tracking "Sarah" like a ranked leaderboard. She is ranking four out of 78, and her progress/how many attempts has been given to the dashboard. What we are seeing is the more data you have, the better analytics you get, but you need to do something with that data. How do I make use of that data, and what is happening across those using the LRS is a way to do that. The beauty





of this is to give the individual as much information as they can to be actionable, and to have the rollup for the higher level in the organization. It's a combination of all of that.

Q13: The list of names, I'm guessing, you didn't just pull this to the assigned unit? You are giving the roster?

A13: Typically we import that roster and it may have come from the LMS. Typically, that record already exists, but what we are trying to do is minimize the times everyone has to fill out the profile. Every time you go to a learning session, a lot of times you start from day one, like a cold start. It doesn't know who you are or your background and you answer these questions, and at the end of the learning, what happens to that data? We are trying to have that record be portable so that any time you do new learning assessments or learning interventions, it knows everything about you, and maybe it will only serve what I specifically need at that particular instance and not start back at the beginning of the course or the module.

Q14: I know you sort of touched on college courses and whatnot. How do you import that? Is it how you can add the college courses, how many may have come in lieu of others?

A14: This is the big picture. Ultimately, they try to integrate that and they work with the different standards to come up with that protocol. If you've got your transcript, we try to have that be validated and the government will have to weigh-in on this. Who will validate to make sure this information is correct? I don't know how it plays out, but that is part of what we are trying to do.

Q15: In DHS we have training managers at the regional level. Why would a supervisor validate that versus a training person?

A15: You can set up any workflow you want to round this. It's just an example. It's not hard wired to work one certain way, it's designed to be totally flexible and depending on how many levels of approval or whatever you have, it doesn't make a difference because you can add those.

USALearning Contacts

Will Peratino, Director, USALearning | 202-418-3033 | William.Peratino@opm.gov

Willie Harrison, Director, LMS Services | 202-606-0106 | Willie.Harrison@opm.gov

Paul Jesukiewicz, Director, Knowledge Portal | 202-606-1313 | Paul.Jesukiewicz@opm.gov

