Creating the Infrastructure Needed for Scalable Learning and Employment Records
June 29, 2022
Why do we care about LER’s?: Exploring State Efforts to Build Learning and Employment Records

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The National Governors Association

NGA Center for Best Practices

The NGA Center is the technical assistance and consultative arm of the organization. The Center helps state leaders develop and implement innovative solutions to public policy challenges.

About NGA

Founded in 1908, the National Governors Association is the voice of the nation's governors. Our members are the governors of the 55 states, territories, and commonwealths. Though our members come from across the political spectrum, we’re boldly nonpartisan.
Exploring the “WHY” of skills/LER’s

What drew us to this topic?

Lifelong Learning

Data Security/privacy

Shifting Credential Landscape

Cross-agency alignment efforts

Meeting industry needs/Connecting to employers/Skills gap

Understanding the burgeoning ed tech space
NGA Skills-Driven States

Community Of Practice – Participating States

National LER Advisory Council Leadership Board

- The Brookings Institution
- Business Roundtable
- Competency Based Education Network
- Credential Engine
- Digital Promise
- Goodwill
- National Association of Workforce Boards
- Markle Foundation
- US Chamber of Commerce Foundation
- The Society for Human Resource Management
“A **learning and employment record** is a digital record of learning and work that can be linked to an individual and combined with other digital records for use in pursuing educational and employment opportunities. An LER can document learning wherever it occurs, including at the workplace or through an education experience, credentialing, or military training. It can also include information about employment history and earnings.”
Starting Point: Policy Connections

Taking a step back from Tech

States are further along than you might realize

Technology is outpacing the policy
Need to Explore the WHY and not just the HOW?

Education/Workforce policy examples
Career pathways
Stackable credentials
Industry-recognized credentials
Non-degree credentials

Technology-Related initiative examples
Supply/demand dashboards
Workforce/job boards
CTDL/Credential data

Stakeholder Engagement connections
Skills-based hiring
Wrap-around services
Starting Point: Opportunities to Innovate

Badges, Certificates, Diplomas, Licenses, Micro-Credentials
- Credentials leading to state licensure
- Stackable career pathways
- Public and private education/training providers

Data Systems
- Learners/workers
- Supply/demand
- Need/wage levels/outcomes
- Interoperability

Technology
- Security/privacy/governance
- AI/Digital wallets
State Examples

Connecticut- Legislation Requires the workforce agency, in consultation with other agencies, to establish standards to designate certain credentials as "credentials of value".

Maryland SB 317 (2017) directed the State Board of Education, Maryland Higher Education Commission, and the Governor’s Workforce Development Board to develop statewide attainment goals for industry recognized credentials.

Indiana SB 198 (2017) includes attainment of an industry recognized certification or credential as part of the state’s definition of a workforce-related program.

The Tennessee Talent Exchange was launched by the Tennessee Department of Labor and Workforce Development, Tennessee Grocers and Convenience Store Association, Tennessee Retail Association, and Hospitality TN. This online portal matches out-of-work Tennesseans with employers that have job openings, with plans to connect to postsecondary education and in-demand credentials.
Equity opportunities

Can these shifts lead to more equitable outcomes?

What are the challenges here?
Asset Mapping

- **Education/Workforce issues:**
  - Ex: Career pathways, transfer pathways, licensure/certification, non-degree credentials

- **Technology-related issues:**
  - Ex: Supply/demand dashboards, data sharing/MOU’s, blockchain, data interoperability

- **Stakeholder engagement:**
  - Ex: Employer connection, upskilling/reskilling, skills-based hiring, Wrap-around services
We are still exploring

More questions for consideration:
What assumptions are we making as we launch this work?
How can current systems shift to focus on skills?
How do we know that this is the right move?
Any questions?

Thank you
Q & A
Learning and Employment Records for Cybersecurity
Credential Transparency Illuminates Paths to a Better Future

There are 1 million credentials offered in the U.S. With so many to choose from, and without widespread adoption of standards for comparing them, people get lost and lose out on opportunities. Together, we and our partners are working to build a trusted open data network that everyone can access to find and navigate more opportunities aligned to their personal goals.

**CREDENTIALS**

Credentials include diplomas, badges, certifications, licenses, apprenticeships, and degrees of all types and levels that represent key competencies signaling what a person knows or can do.

**WHAT: TRANSPARENCY**

Credential transparency makes essential information about credentials and competencies public, easily accessible, and actionable so that credentials can be better understood and pursued based on what they teach, what they represent, and the paths they can lead to.

**HOW: TECHNOLOGY**

Credential transparency is made possible by technology. The Credential Transparency Description Language (CTDL) is a schema allowing organizations to define credentials and connect them with information. Credential data from authoritative sources using CTDL is openly available in the Credential Registry for anyone to search and compare credentials.

**WHERE: PATHWAYS**

The easier it is to access and use comparable information about credentials, the easier it is for people to find the most effective paths to learn the right skills and find the best jobs. Credential transparency arms everyone with reliable information about quality pathways to opportunities, makes those pathways discoverable, and empowers individuals along the way.
Learners are central to the ecosystem

Connecting credentials, skills, and jobs across lifelong learning and career opportunities
Disconnected learn and work records

**DATA COLLECTED**
- Grades, Attendance, Assessments, Diploma
- Employment & Wage Record, Resume
- Student Transcript
- Employment & Wage Record Skills & Competencies
- State UI Case Management System
- Student Record
- Employment & Wage Record Skills & Competencies

**WHERE IS IT STORED**
- Student Information System (SIS)
- HRIS System Payroll System Online Profile
- Student Information System (SIS)
- HRIS System Payroll System Online Profile
- State UI Database & Workforce Case Management System
- SIS System Online Profile
- HRIS System Payroll System Online Profile

**WHO HAS CONTROL**
- School District
- Employer
- Institution of Higher Education
- Employer
- State Agency & Local Workforce Agency
- Training Program
- Employer

**WHO HAS ACCESS**
- Parents, Foundations, Programs, Researchers
- Future Employers, Creditors
- Student, Foundations, Programs, Researchers
- Employee, Future Employers, Creditors
- State Programs, Training Programs, Researchers
- (Parents) State Agencies, Foundations, Researchers
- Employee, Future Employers, Creditors
Connected learn and work records

Credential, skill, and job transparency

Verifiable digital learning and employment records powered by the Credential Transparency Description Language (CTDL)

- Open
- Linked
- Trusted
- Accessible
- Useful
- Relevant

Education and Training + Workforce Demands

Opportunities for people
What are Learning and Employment Records (LERs)?

“A Learning and Employment Record (LER) is a digital record of learning and work that can be grouped together with other individual LERs for use in describing their abilities when pursuing education and employment opportunities. An LER can document learning wherever it occurs, including at the workplace or through an education experience, credentialing, or military training. It can also include information about employment history and earnings.” (T3 LER hub)

- Digital records of learning and work combined from diverse sources
- Verifiable and secure
- Controlled and shareable by the individual
- Interoperable: transferable, meaningful, and machine-actionable across education and employment systems and processes
Global Open LER Standards

Standards support full transparency and interoperability of LERs:

**W3C Verifiable Credentials and Wallets**
- VCs for universal verification and delivery data
- VC wallets for collection and storage of LERs

**Open Badges 3.0**
- For content packaging of single records

**Comprehensive Learner Records 2.0**
- For content packaging of multiple records

**Credential Transparency Description Language (CTDL)**
- For meaningful Linked Open Data so that LERs can be usefully understood and applied
Open Badges: Meaningful Linked Open Data Inside

Alignments to CTDL in the Credential Registry

Tags

Earning Criteria
Verifiable Credentials owned and controlled by the individual

Making it simple for people and organizations to exchange verifiable, trusted career credentials.

Velocity Network Foundation

Claim digitally signed records from your work or college to build a verified career portfolio.

Stack proofs of your employment history, educational background, skills, and qualifications.

Organize all your career and education credentials. Store them privately.

Control who you share your records with.

Workforce (individuals)

Issuing Parties (employers, educators issuing digital credentials)

Relying Parties (employers, educators receiving digital credentials)

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Relying Parties (employers, educators receiving digital credentials)
Verifiable Credentials include alignments to CTDL in the Credential Registry, which hosts rich Linked Open Data about credentials, skills, and pathways.
Credential Transparency Description Language (CTDL)

An open schema for transparent, meaningful information to build learn and work ecosystems.

- Credentials
- Knowledge, skills, and abilities
- Jobs and work roles
- Pathways
- and much more....

https://credreg.net
LERs connect to a world of Linked Open Data

Linked Open Data on the web for rich knowledge graphs that are human and machine readable
Building a Skills-Based Talent Marketplace

Verifiable Credentials Wallets for Learning and Employment

JFF.org/digitalwallets
PlugFest

- Companies who develop solutions implementing a standard meet and check that their implementation is compatible with the implementation of another solution developer
  - Question: Can my credentials be portable across systems?
- Demonstration, not standards certification
- Interoperability, not integration
PlugFest 1, June 2022 - Hello, world! I am a VC Wallet!

- The wallet can display a verifiable credential
- Credential shows important data about the issuer, how credential was earned, etc.
- Minimum data requirements are met

PlugFest 2, November 2022 - ... and I can hold a variety of credentials

- Credentials issued by another credential provider in the same wallet

PlugFest 3, 2023 - ... and they can be shared by the user

- Credentials from multiple providers can be combined and shared
- Export credentials to another wallet
LER Interoperability Principles and Classification
Draft Principles of Interoperability for LERs

- **Open Standards**: Require use of open data standards in the creation, exchange, and use of LERs including the competency/skill and employment data.

- **Trust**: Create a trusted environment for employers, individuals, and education providers for the collection, sharing and using of an individual’s competency/skill, credential, and employment data as currency in the talent marketplace.

- **Privacy and Security**: Systems should protect privacy and security in all aspects of interoperability and the expectations of individuals about their privacy and security are respected.

- **Universal Access**: Every learner/worker should have access to and control of a digital wallet to store, manage, and curate their LERs. Wallets should use multiple open standards to support all kinds of LERs.

- **Support Multiple Levels of Achievements**: We must account for the range of learning and employment opportunities and support the capabilities of multiple systems to offer learning, validate skills, and produce LERs. Including accommodation of self assertions of competency/skill.

- **Alignment**: States, districts, federal agencies, employers, and others must be aligned in their support of the principles.

- **Market Demand**: The market, guided by public and private investment, should encourage innovation to meet evolving demands for interoperability.

- **Think globally, act locally**: LERs and digital wallets must function in local, regional, state, national and global talent marketplaces.
Inclusive Design Principles for Learning and Employment Records
How can learner/workers use their own records?

- Collect and curate records
- Analyze strengths and gaps in skills
- Explore career opportunities
- Include records in a professional or social profile
- Apply for, enroll in, and complete education and training
- Apply for employment
- Manage career advancement and transition

Inclusive Design Principles for Learning and Employment Records

1. Individuals can share evidence of their skills and competencies, in addition to work history.
2. Demonstrate learning progress over time, not just one point in time, such as degree completion.
3. Individuals can control how their information is presented and shared.
4. Address safety and privacy concerns, especially for historically and systematically marginalized individuals.
5. Prioritize lifelong access and ease of use.

Learning and Employment Records for Greater Equity

Power your LERs with global open standards connecting equitable learning and career pathways

Standards support full transparency and interoperability of LERs:

W3C Verifiable Credentials and Wallets
Open Badges 3.0
Credential Transparency Description Language (CTDL)

1. Define requirements for information that makes LERs valuable.
2. Organize data about credentials, skills, jobs, and pathways from multiple sources.
3. Map the data to CTDL and include CTDL in LERs issued to individuals.
4. Issue and receive credentials to/from VC wallets.
5. Provide equitable on-ramps and supports leading to opportunities.
6. Ensure people have control over collecting and sharing their own LERs.
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**Upcoming Webinar:**
“Optimizing Your LinkedIn Profile for Your Cybersecurity Career”

**When:** Wednesday, July 20, 2022, 2:00PM – 3:00PM ET

**Register:** [https://go.usa.gov/xJFKt](https://go.usa.gov/xJFKt)

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