SIF Specification
Powered by A4L

EDUcore:

Building a Foundation for Solutions to Stand On

Presenters

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Introduction

EDUcore is a new Gates funded project by Data Standards United that aligns what already exists into a governed semantic backbone and a practical "source of truth." It will source a reference library with versioned mappings tied to real use cases, so districts, colleges, employers, and states can retain their current systems while gaining safe, secure, lower-cost interoperability.

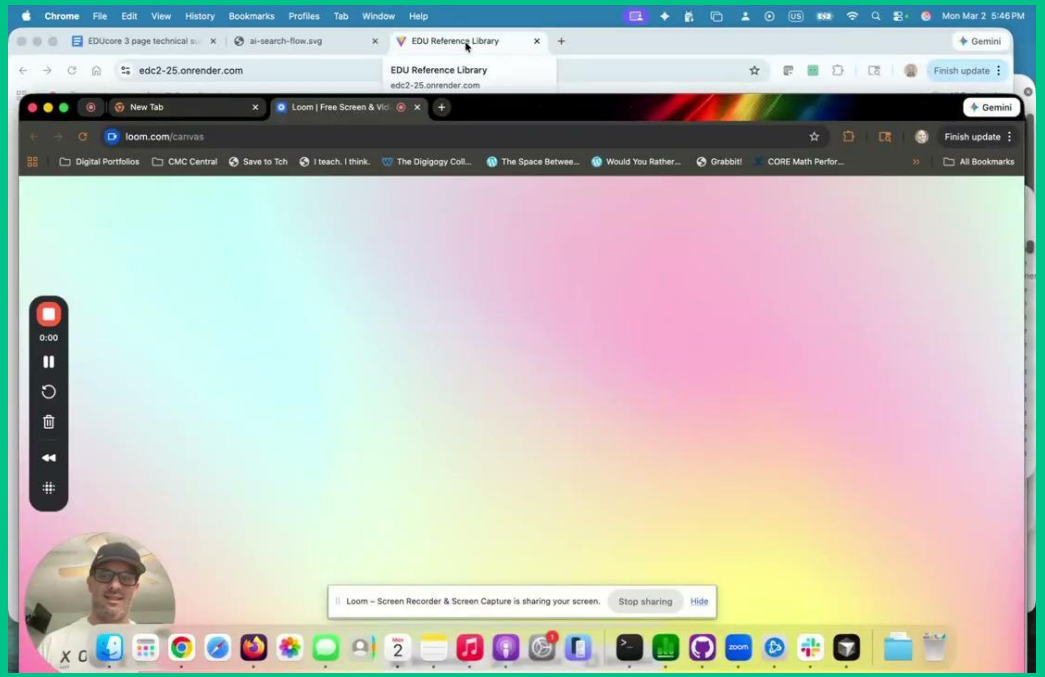
EDUcore is building the interoperability layer that will make AI more reliable across education and workforce systems. Today's standards are usable, but they're fragmented, inconsistently implemented, and don't map cleanly across sectors, so most integrations become one-offs and AI can't be consistently grounded in authoritative meaning.

Introduction (continued…)

EDUcore aligns what already exists into a governed semantic backbone and a practical “source of truth.” It will source a reference library with versioned mappings tied to real use cases, so districts, colleges, employers, and states can retain their current systems while gaining safe, secure, lower-cost interoperability. The result is faster, more trustworthy data sharing and an AI-ready foundation that smaller, under-resourced organizations can use, not just the biggest players

EDUCore Concept Demo

by Brandon Dorman



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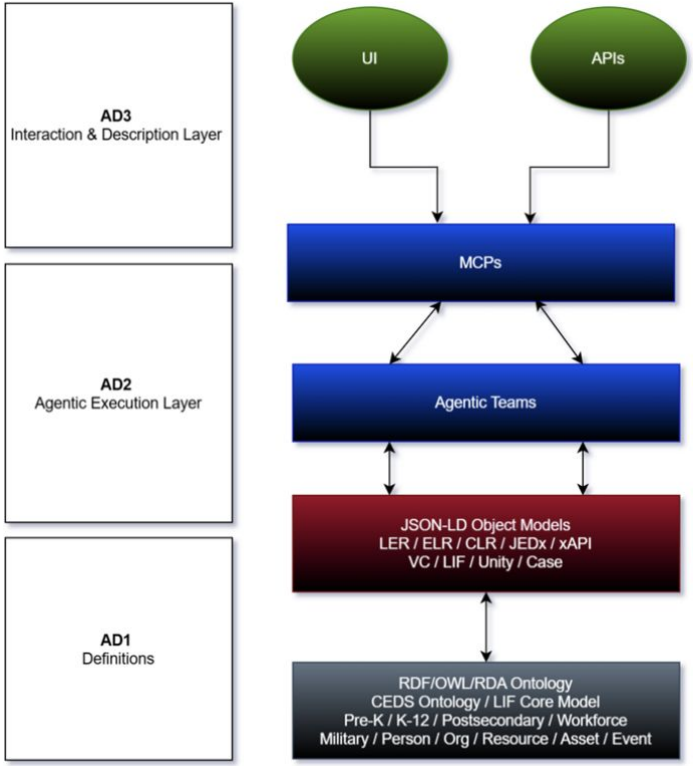
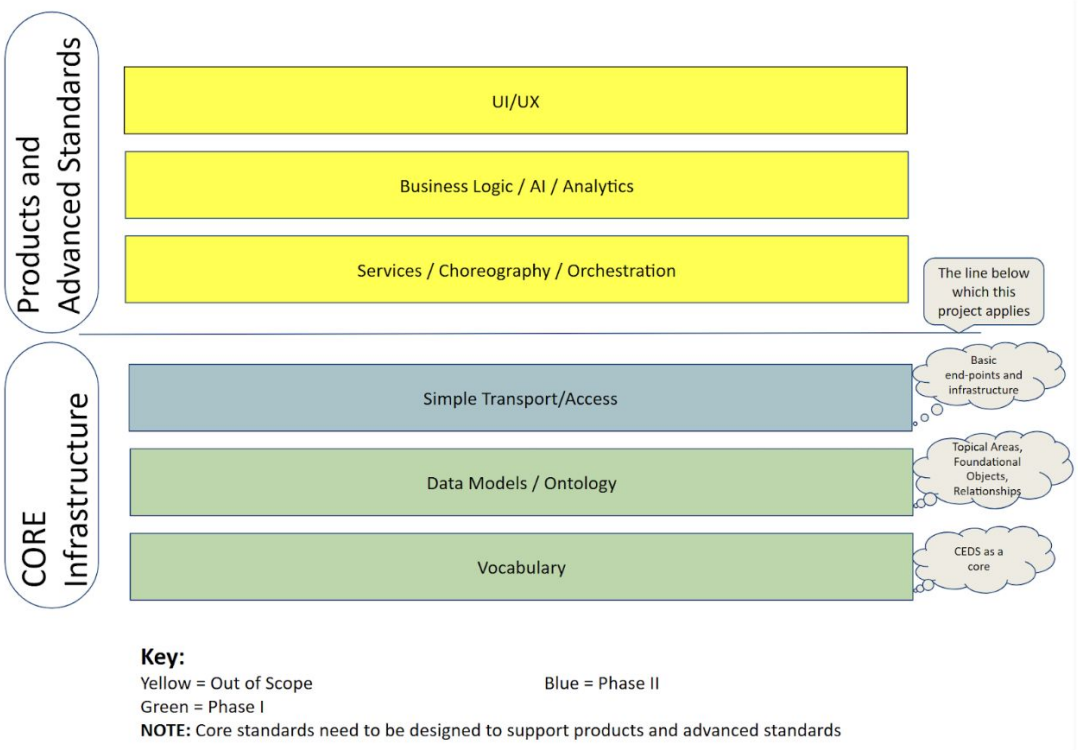
EDUCore Solution Architecture

EDUCore is a multi-layered infrastructure that will address structural incoherence by utilizing a five-layer architecture design that leverages modern ubiquitous tools and design patterns like RDF/RDA, JSON-LD, Agentic AI Teams, MCP design patterns, and modern API and UI interfaces.



Semantic Alignment Layer

- Harmonizes existing standards into a unified, extensible semantic model.
- Provides canonical definitions, mappings, and transformation rules.
- Supports versioning, provenance, and meaning-preserving translation across systems.



Reference Library

EDU will publish and maintain a Working Reference Library that serves as the shared “source of truth” for this ecosystem, establishing context and providing navigation to stakeholders, partner agreements, repositories, and other essential resources. The primary deliverable is a living, AI-driven website that functions as a standards and project library, enabling stakeholders to find, access, and apply approved Gates Foundation and standards-based resources intelligently. Consistent with DSU principles and the Gates Foundation’s emphasis on scalable public benefit, EDU will ensure referenced materials are open and accessible or clearly labeled when restrictions apply.

Use Cases

- Regions who want to implement LER’s
- Educational organizations wanting to make data portable
- Economic Development organizations seeking learning data for targeted grant development
- Foundations looking for educational outcomes data

Activity

In tables, discuss which specifications you would use for the following scenarios:

I am a K12 school district wanting to send transcripts and student IEP data to a digital wallet provider

I am a university work office wanting to send a student with all information about their courses and other learning, as well as non-academic accomplishments to an employer

Discussion

What are common specifications that you're hearing being discussed

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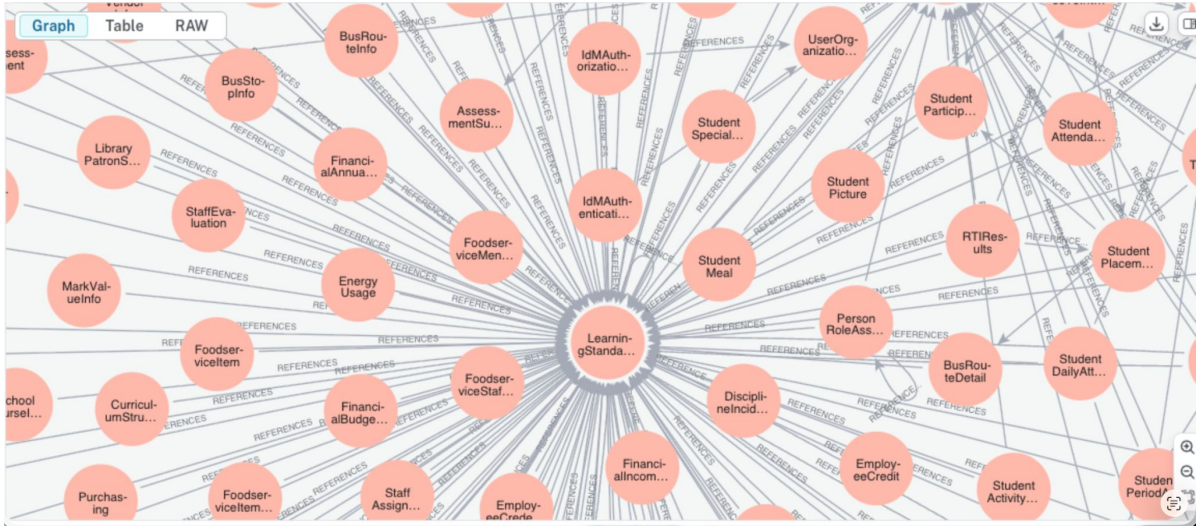
How do we visualize this?

Behind the scenes, we will make a knowledge graph of specification use cases and how those are covered by current specifications down to the fields used.



CEDS

The CEDS ontology is already a knowledge graph that has vocabulary used across the education landscape.

We want to ensure all interoperability specifications from early education to career has vocabulary in CEDS.

AI Level

Core Capabilities Delivered

Delivering essential infrastructure for education and workforce ecosystems. Our solutions ensure seamless data integration, secure identity management, and AI-optimized learning pathways.

Data Model Translation

Provides *meaning-preserving* translation across heterogeneous systems for districts and states.

Cross-System Alignment

Aligns competencies, credentials, and assessments to ensure **consistent** learner recognition.

Federated Identity

Enables secure record portability and **reliability** across diverse P20W+ contexts.

AI-Driven Workflows

Automates advising and matching to deliver **personalized** pathways and reduce overhead.

User Level

Seamless query and instructions for how to implement various specs and how data will look in its end state.

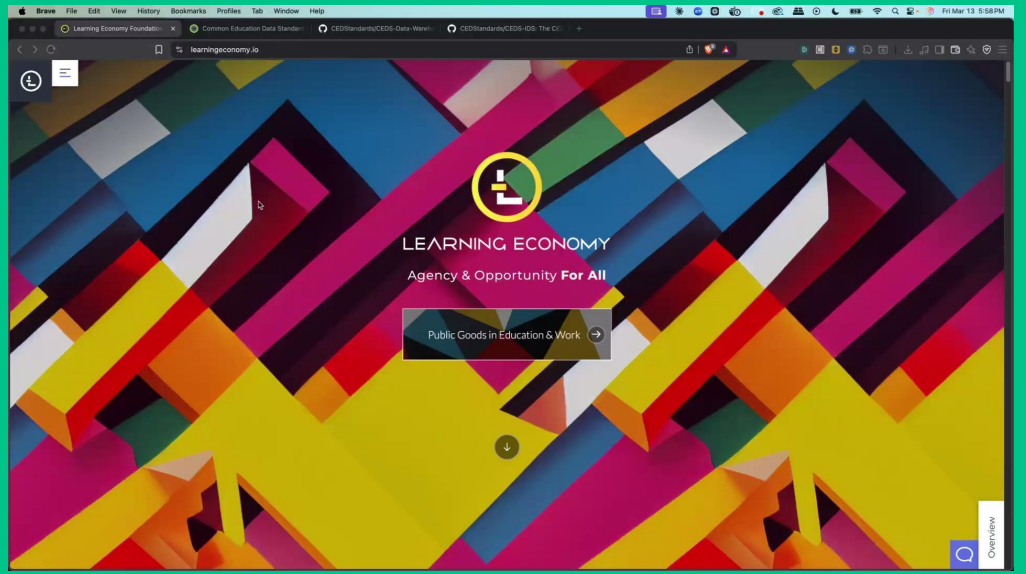
We want users to see exactly the information they need to solve the problem, along with specification implementation assistance.

The Microcredential Multiverse

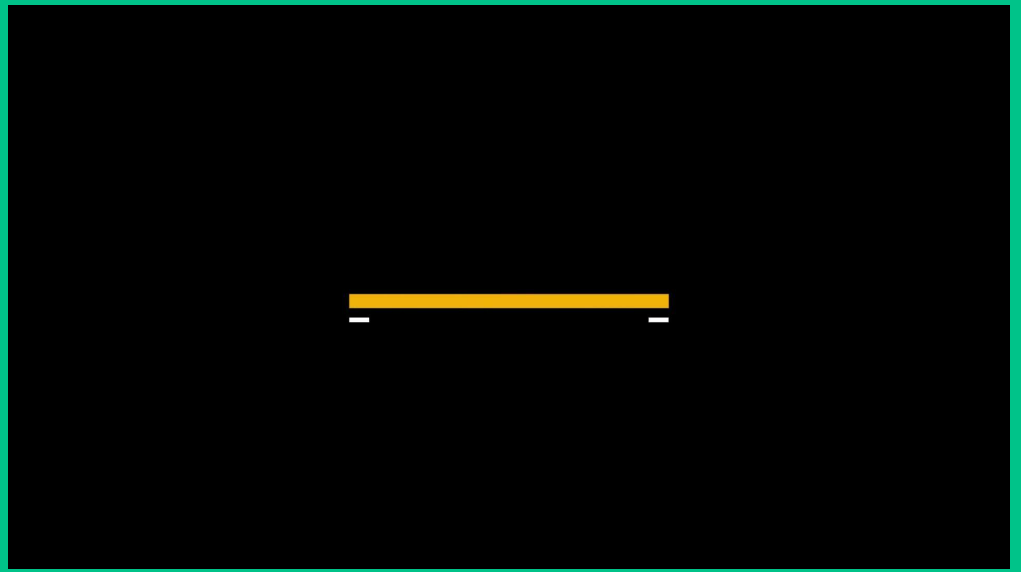
by Robert Bajor

Exploring Equity Gaps in Education

by Jackson Smith



EDUCore: From Concept to Reality



by David Moldoff