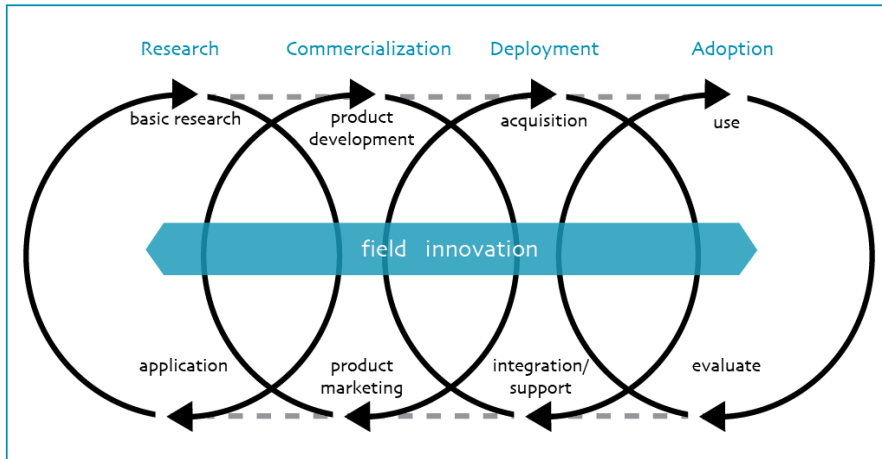


Education Innovation Clusters: Accelerating the Pace of Innovation

Overview

By accelerating the pace of innovation in learning sciences and technologies, the United States has the opportunity to close the achievement gap, improve national competitiveness, and drive economic growth. Accelerating the pace of innovation requires a fresh approach to research and development and the infrastructure that supports it. The following image shows how research, product development, and adoption should be linked together in an education innovation ecosystem where each part of the process informs and improves the next.

Education Innovation Ecosystem



Unfortunately, the current research and development pipeline in education doesn't look like this. Instead of an interconnected ecosystem, there is a series of disjointed processes that don't inform or support each other. Research in learning science is disconnected from practical implementation. High development costs and limited investment funding hamper the commercialization of solutions. Impenetrable acquisition processes inhibit deployment of new tools and approaches. Lack

of infrastructure and data-driven improvements stifle adoption. All of this is particularly frustrating at a time when advances in technology and digital media hold the potential to dramatically reshape the way we approach instruction, assessment, and data use. An intentionally integrated innovation ecosystem, that links the different partners in an ongoing and iterative design process, can help remove the barriers that slow innovation in learning technologies.

Education Innovation Cluster (EIC)

Creating a new education innovation ecosystem requires new types of partnerships that cross traditional domain silos. This has been demonstrated in other industries that have been successful at accelerating innovation. Many innovations in green energy technology, for example, have come from networks of synergistic partners leveraging a region's unique competitive strengths and common talent. Across the country education innovation clusters are forming, where forward-thinking partners focus on breakthroughs in learning technologies, streamlining research in learning science and accelerating the development of new tools and approaches for learning. In combination with a supportive regulatory and funding context, these innovation centers have the potential to lead the nation in the creation of new knowledge, tools and outcomes.

The US Department of Education seeks to identify forward-thinking regions where commercial, academic, and education partners have come together to form an innovation cluster focusing on a specific challenge that their

"Entrepreneurs and researchers and innovators want to be around each other. They want to feed off the shared creative energy. They want access to a shared talent pool. They want to build relationships. So if a local community is able to plant that seed- if it's able to create the climate for innovation and build a critical mass- then private investment will follow. Innovation will follow. Jobs will follow."

**- John Fernandez, Assistant Secretary
Economic Development Administration**

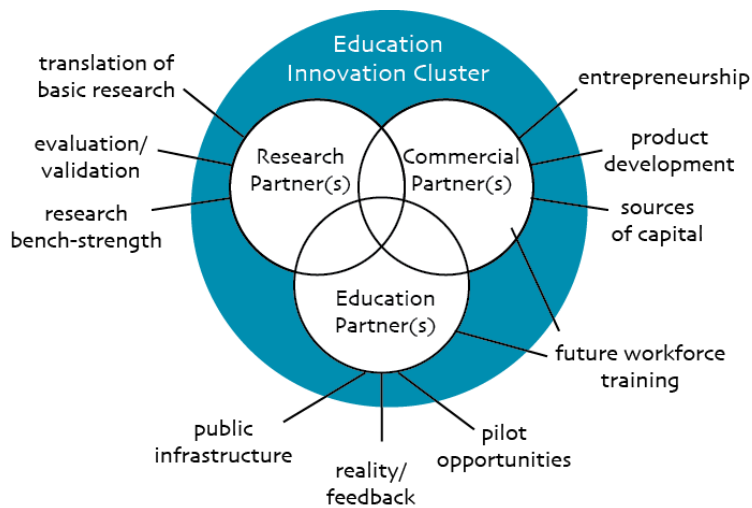
region is uniquely suited to address and solve. While the focus of the clusters will vary depending by region, some areas of focus may include:

- Adaptive/personalized learning
- STEM education
- Gaming and simulations
- Learning analytics
- Print to digital transition
- Data system integration/interoperability

Elements of an Education Innovation Cluster

To be considered an Education Innovation Cluster, a region will articulate the connection between three key partners; educators, researchers, and entrepreneurs - each adding their unique strengths to the network.

Educational partners would provide the environment where emerging learning technologies could be piloted and new solutions could be developed with input from students and teachers. Educational partners might be early learning providers, public and/or private schools, libraries, community centers, after school programs, institutions of higher education, or virtual learning environments. These innovative schools and learning centers would provide the flexibility and capability to rapidly develop, test, and collect data on new approaches and products.



Research partners would conduct basic and applied research related to advancing the field of learning science. They would be integrally connected to the entrepreneurial partners to ensure effective design of learning technologies. They would also have deep relationships with the educational partners to streamline the collection of data and outcomes to conduct ongoing evaluations of the products and approaches developed in the cluster.

Commercial partners would infuse new technologies to address problems and help scale and market successful implementations. They could also provide investment capital to accelerate the commercialization of intellectual property and increase the probability of success of new enterprises built on the knowledge and solutions generated in the cluster. The quality and relevance of products will greatly improve with consistent access to the educational and research partners in the cluster.

Identifying Education Innovation Clusters

The US Department of Education seeks to identify potential Education Innovation Clusters, facilitate connections between clusters, share best-practices, and help other interested regions model their successful processes. This is done through convening relevant stakeholders, publishing case studies, and disseminating information between and among clusters.

Innovative, forward-thinking regions from across the country are invited to participate in the education innovation clusters network. To be considered as an education innovation cluster, regions should have the key elements listed below:

1. Regional Assets:
 - Local leadership to provide stability and sustainability for the cluster
 - Key research, education, and entrepreneurial partners working in collaboration

2. Area of Focus:
 - Shared focus on advancing research in the learning sciences and developing learning technologies
 - Specific plan of action to address a challenge that the region is uniquely suited to solve

3. Structure and Implementation:
 - Infrastructure and practices for sharing knowledge and expertise across the cluster
 - Iterative research/design processes
 - Common organizing frame and evaluation metrics