Youth CareerConnect and the STEM Learning Exchanges

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Northern Illinois University
Office of Education System Innovation
Agenda

1. Illinois Pathways and STEM Learning Exchanges Overview

2. Youth CareerConnect Overview

3. Support from STEM Learning Exchanges for a strong application
Illinois Pathways

• Built from longstanding state strengths:
  o Agricultural education model
  o CTE Programs of Study
• Race to the Top as an accelerant
• 60% by 2025

• **Mission:** Empower and support Illinois learners to explore, progress through, and transition from high quality, structured career pathway systems into rewarding careers in critical growth areas for the Illinois economy.
Illinois Pathways Strategies

• Support **local career pathway systems development** that **empower students** to explore their academic and career interests in STEM fields.

• Launch **new statewide, public-private partnerships** known as **STEM Learning Exchanges** that better coordinate investments, resources and planning in a particular industry cluster.
Illinois Pathways – Focus Areas

Builds off of the National Career Cluster Framework and supports career pathway systems in eight STEM application areas:
Career Pathway Systems: Key Features

- **Elementary and Middle School**
  - Strong academic foundation
  - Career exploration
  - Education & career plan development

- **Secondary Education 9th and 10th**
  - Orientation level courses
  - Career exposure (job shadows, competitions)

- **Secondary Education 11th and 12th**
  - Pathway-specific course sequence
  - Work-based learning and career preparation
  - Industry-based credentials

- **Postsecondary Education and Careers**
  - Transitions to college and/or employment
  - Stackable credentials
Elementary and Middle School

- Career Awareness
- Career Exploration

Secondary Education 9th and 10th

- Problem-based Competitions
- Service Learning
- Job Shadows

Secondary Education 11th and 12th

- Career Preparation
- Internships
- School-based Enterprises

Postsecondary Education and Careers

- Apprenticeships
- Work Experience
STEM Learning Exchanges

- **Public-private networks** in each of the identified STEM application areas
- Organized to support local implementation of career pathways by **improving coordination** and **reducing the transaction costs** among network partners
- Available to partner with and support K-12, postsecondary and workforce programs **statewide**
## Designated STEM Learning Exchanges

<table>
<thead>
<tr>
<th>STEM Cluster Area</th>
<th>Lead Entity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Food &amp; Natural Resources</td>
<td>Illinois Foundation for Future Farmers of America</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>University of Illinois at Chicago</td>
</tr>
<tr>
<td>Information Technology</td>
<td>CompTIA Workforce Development</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Illinois Manufacturers Association Education Foundation</td>
</tr>
<tr>
<td>Research &amp; Development</td>
<td>Illinois Science and Technology Institute</td>
</tr>
<tr>
<td>Energy</td>
<td>Illinois State University</td>
</tr>
<tr>
<td>Finance</td>
<td>Econ Illinois</td>
</tr>
<tr>
<td>Transportation, Distribution &amp; Logistics</td>
<td>Illinois Manufacturers Association Education Foundation</td>
</tr>
</tbody>
</table>
STEM Learning Exchange Functions

- Manage System Design and Track Performance
- Deliver Resources and Supports for Local Pathway Systems
- Expand Quality Work-based Learning Opportunities

- Outreach Resources
- Curriculum
- Lab Space & Equipment
- Teacher PD
- Student Organizations
- Internships, Job Shadows
- Sponsor industry challenges
Historic Funding & Support Model
One – Off System

Philanthropy

Federal Government

State Government (Education Agency)

State Government (Economic Dev. Agency)

Employer Associations

Business

School

Program

School

Program

Program

School

School

School

School

School

School
Local Implementation Infrastructure

Private-Public Backbone Organization(s) as Major "System Engines"

Develop: Convene stakeholders to identify needs and arrange commitments to collaborate. (Leadership Team)

Oversee: Monitor and report to regional leadership on the status of system development; identify needs for support and accountability for front-line organizations & collaborations.

Front-Line Organizations: these Directly Serve Young People and Employers

- High Schools
- Community Colleges
- Non Profit Organizations
- Workforce Intermediaries
- Employers
-Elementary and middle schools

Better Post-Secondary & Career Outcomes for Young Adults
STEM Learning Exchange Engagement

- 25 Race to the Top School districts with high schools
- The ready and the willing communities
- Meaningful engagement with approximately 200 high schools statewide
Youth CareerConnect Overview

- $100 million in grant funds
- Approximately 25 – 40 successful applicants
- Eligible lead applicants:
  - Public or nonprofit local workforce entities
  - LEAs
  - Nonprofits with related program model experience
- Entities can only lead one application, but can partner on multiple
- Applications due by January 27, 2014
### Scoring Rubric

<table>
<thead>
<tr>
<th>Scoring Rubric Area</th>
<th>Max Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>i. Statement of Need</strong></td>
<td><strong>16</strong></td>
</tr>
<tr>
<td>a. Poverty rate of geographic area</td>
<td>3</td>
</tr>
<tr>
<td>b. % of students from low-income families</td>
<td>4</td>
</tr>
<tr>
<td>c. Median income level of geographic area</td>
<td>3</td>
</tr>
<tr>
<td>d. Industry focus</td>
<td>6</td>
</tr>
<tr>
<td><strong>ii. Program Design</strong></td>
<td><strong>56</strong></td>
</tr>
<tr>
<td>a. Integrated academic &amp; career-focused learning</td>
<td>16</td>
</tr>
<tr>
<td>b. Employer engagement</td>
<td>8</td>
</tr>
<tr>
<td>c. Career and Academic Counseling</td>
<td>7</td>
</tr>
<tr>
<td>d. Work-based Learning and Work Experience</td>
<td>8</td>
</tr>
<tr>
<td>e. Partners</td>
<td>17</td>
</tr>
<tr>
<td><strong>iii. Organizational Profile</strong></td>
<td><strong>17</strong></td>
</tr>
<tr>
<td>a. Program Management</td>
<td>5</td>
</tr>
<tr>
<td>b. Sustainability</td>
<td>8</td>
</tr>
<tr>
<td>c. Budget</td>
<td>4</td>
</tr>
<tr>
<td><strong>iv. Data Collection and Program Performance</strong></td>
<td><strong>11</strong></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Lessons from a Federal Grant Veteran

- It’s all about the scoring rubric
- The reviewers know nothing about your local context
- Ambitious yet achievable
- Go through the process to build partnerships and sharpen plans – not because you expect to win
Six Core Elements

1. Integrated Academic and Career-focused Learning
2. Employer Engagement
3. Individualized Career and Academic Counseling
4. Work-based Learning and Exposure to the World of Work
5. Program Sustainability
6. Program Performance and Outcomes
1. Integrated Academic and Career-focused Learning

What’s required:

- Organized around one or more careers within high-growth H-1B industries appropriate to the local/regional market
- Multiple educational and career pathways that help participants transition into employment or postsecondary
- Aligned with CCSS and NGSS
- Where feasible, result in an industry-recognized credential
- Postsecondary partnerships and/or dual credit
- A non-duplicative sequence of integrated college and career-focused courses, with at least one career-focused course per year
1. Integrated Academic and Career-focused Learning

How the Learning Exchanges Can Help:

- Defining an integrated college- and career-focused course sequence aligned to industry pathways
- Curricular and PD resources
- Implement industry-based credentials as part of a structured curriculum
### Manufacturing Pathways

- **Manufacturing Production Process Development**
- **Production**
- **Automation**
- **Logistics and Inventory Control**

#### Manufacturing Pathways

<table>
<thead>
<tr>
<th>Orientation (e.g. Middle &amp; High School)</th>
<th>Pathways (e.g. High School)</th>
<th>Postsecondary Education and Training</th>
<th>Careers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technology Orientation</strong></td>
<td><strong>Manufacturing Production Process Development</strong></td>
<td><strong>Bridge / Certificates and Associates / Bachelors / Graduate</strong></td>
<td><strong>Careers</strong></td>
</tr>
<tr>
<td><strong>Production</strong></td>
<td><strong>Automation</strong></td>
<td><strong>Maintenance, Installation and Repair</strong></td>
<td><strong>Careers</strong></td>
</tr>
<tr>
<td><strong>Logistics and Inventory Control</strong></td>
<td><strong>Quality Control</strong></td>
<td><strong>Health, Safety, and Environmental Assurance</strong></td>
<td><strong>Careers</strong></td>
</tr>
</tbody>
</table>

**Legend:**
- Co = Courses
- Wo = Work-Based Learning
- Cr = Credentials / Assessments
- Pa = Shared Pathways
## Curricular Resources

<table>
<thead>
<tr>
<th>Learning Exchange</th>
<th>Curricular Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>“Dream It-Do It” web-based library of e-learning materials</td>
</tr>
<tr>
<td>Energy</td>
<td>Catalogue of open source energy related curriculum and lesson plans</td>
</tr>
<tr>
<td>IT</td>
<td>Online model lesson plans; donations of Microsoft courses from IIT</td>
</tr>
<tr>
<td>Health Science</td>
<td>Out of the box curricula and lesson plans; curricular advising; online anatomy &amp; physiology course</td>
</tr>
<tr>
<td>Research &amp; Development</td>
<td>Vetted R&amp;D focused resource repository</td>
</tr>
</tbody>
</table>
2. Employer Engagement

What’s required:

- Must include at least one employer or consortium of employers for each selected high-growth industry
- Employer partners role must be actively engaged and providing resources to support the program, including:
  - Defining strategies and goals
  - Assisting with curriculum development and design
  - Resources to support education/training
  - Mentoring, externships, field trips, project-based learning, hiring preferences
  - Ongoing TA
2. Employer Engagement

How the Learning Exchanges Can Help:

- Identify and obtain meaningful commitments from employer partners
- Ongoing TA and participation from employers
STEM Learning Exchange Employer Partners
3. Individualized Career and Academic Counseling

What’s required:

- Programs must provide individualized career and academic counseling that includes career and post-secondary awareness
- Must include creating Individual Development Plans that should include career objectives, a program of study/degree or certificate objectives, and work experiences
- Encourages the use of workforce/community resources that can deliver direct career counseling or augment services provided by the school district
3. Individualized Career and Academic Counseling

How the Learning Exchanges Can Help:

- Career exploration activities
- Occupational information based on local and regional labor market conditions
- Identify industry professionals to serve as career coaches or mentors
- Connection to statewide Individual Development Plan efforts through ISAC; Illinois Shared Learning Environment
4. WBL and Exposure to World of Work

What’s required:

- Program must include planned, structured learning experiences that take place in a workplace for a limited period of time
- Designed to enable youth to gain exposure to the working world; inspire and energize through the practical application of skills and knowledge
- Encouraged to pay for work experiences through matching funds
- Must also include exposure to various career pathways, particularly early in the program (classroom speakers, field trips, job shadowing, etc.)
4. WBL and Exposure to World of Work

How the Learning Exchanges Can Help:

• Designing a work-based learning continuum
• Accessing a network of employers for resources and commitments
• Sponsoring and designing student challenges
CAT Student Competition

- Highlighted career opportunities in agriculture, engineering, and manufacturing
- 20 student teams; 4-students/team
- Pre-event marketing component
- Tours, keynote speaker
- Mechanical parts identification, applied practicum, and safety inspection
5. Program Sustainability

What’s required:

- A focus on professional development during the grant period
- A sustainability plan that outlines how the program will be designed to build capacity and continue to provide the same level of instruction and support to all participants
5. Program Sustainability

How the Learning Exchanges Can Help:

- Professional development resources aligned to industry clusters
- Partnerships for ongoing support
- Alignment of community programs to state-level resources and funding streams
6. Program Performance and Outcomes

What’s required:

- A strong focus on performance measures, both short- and long-term
- A data collection plan for tracking of specific data elements to report against program performance measures
6. Program Performance and Outcomes

How the Learning Exchanges Can Help:

• Advising on a performance metric framework
• Assessing availability of data
Closing Thoughts/Questions

For more information:

www.ilpathways.com

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