Making Industry Partnership Work in ATE: Insights from Targeted Research

Louise Yarnall
Raymond McGhee
SRI International

Joseph Ames
Ames & Associates

Partnership Study

- Case studies of five sites, representing three ATE Centers/ Projects, with five different fields, maturity levels, geographic reach
- Interviews
- Iterative thematic analysis around partnership phases: emergence, transition, maturity, and crossroads

Strategic Need

Are You Identifying Community Priorities and Supports?

- Secure public/private funding
- Focus on economic development in one industry sector
- Seek government agency support
- Identify regional economic and workforce development goals

Formation

Are You Building Relationships, Roles, & Good Communication?

- Identify persuasive leaders, champions
- Establish liaisons at multiple levels of local industry and college(s)
- Use multiple ways to communicate with key partners
- Plan for partnership marketing, troubleshooting, & metrics

Partnership Capital

Are You Sharing Resources, Responsibilities, & Decisions?

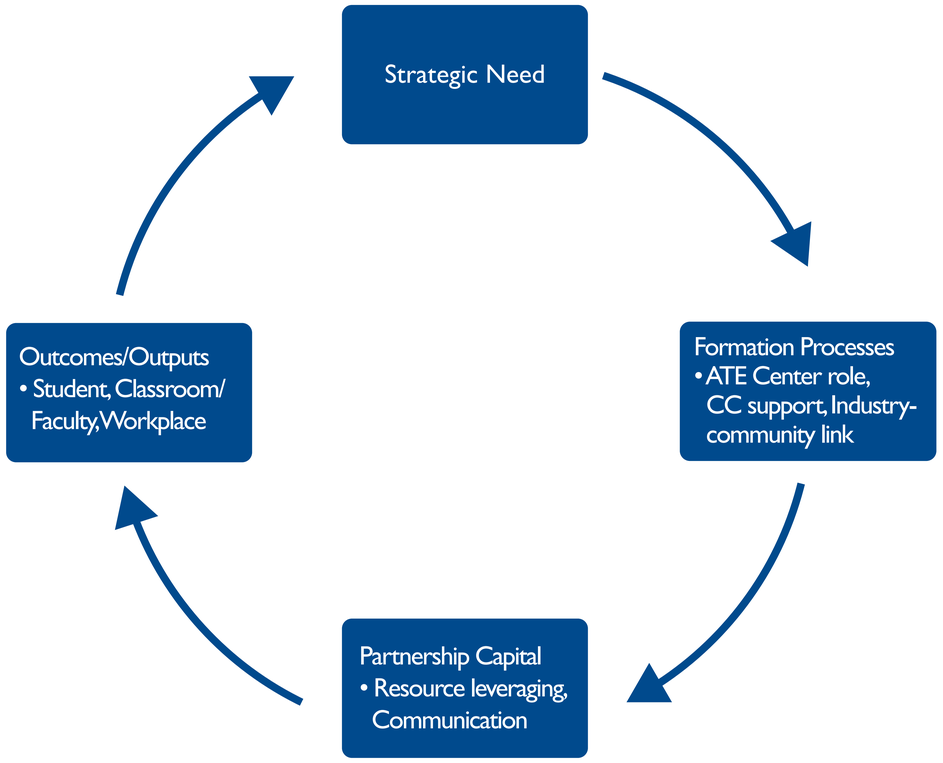
- Industry: Offer promotion path linked to credentials, flexible hours, tuition reimbursement, and equipment, materials, space, instructors, expertise, and externships
- CC: Offer greater industry role in curriculum and standards, student credit for prior learning, stackable credentials, basic skills integrated with workforce courses, instruction focused on "bridging" students toward industry knowledge and skills, professionalism, problem solving/troubleshooting

Outcomes

How are You Evaluating Program & Student Results?

- College: Offer transparent reports on enrollment, completion per credential/degree on program
- Industry, college, and workforce boards: Track jobs attained by program graduates, analyze cost-benefits of program

Partnership Model



Instruction Study

- Case studies of two colleges representing two different technical fields
- Interviews to describe partnerships' instructional goals and mechanisms
- Select four tech classes per college at different levels of sequence:
  - Instructional practice: Classroom observations and interviews
  - Curriculum: Artifacts rated by expert panels

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Workforce Partnership Capital Development Framework

ATE RESEARCH

Industry-Community College Partnership: What Research Shows

- More than ever before, the slow U.S. economy requires workforce educators to open up their programs to closer collaborations with industry partners
- Our NSF-sponsored research of several Advanced Technological Education (ATE) Centers and projects characterizes common **Partnership Capital Development Features.**
- These features are more extensively listed in our research, but this card provides a sample. It is based on our findings from several case studies about how to identify strategic needs with industry, how to form partnerships, and how to build partnership capital.

Directions for use:

1. Consider the following questions:
   a. What are some of the institutional or cultural barriers that may hinder interaction and collaboration between industry and the CC?
   b. How can partners work to promote permeable organizational boundaries that facilitate information sharing and collaboration?
   c. What can leaders in each partner organization do to assist partners in navigating organizational boundaries?
2. Use the checklist to focus on key planning considerations and determine where you stand in the planning cycle: Early discussion, Initial reflection on plans, Initiating action
3. Use to develop possible success indicators for your partnership, such as:
   a. A preliminary plan on how to create stakeholder buy-in and balance competing concerns.
   b. Identify individuals who can navigate between partners and/or interpret institutional/corporate cultures.
   c. Identify processes to streamline communication processes to minimize burden.
   d. Identify persuasive leaders who can endorse partnership

Email:
RAYMOND.MCGHEE@SRI.COM

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Workforce Partnership Capital Development Framework

ATE RESEARCH

Forming Partnerships-Organizational Boundaries

Goal: To identify what collaborators can and can't do in the context of the partnership and provide ways to navigate between partners.

Forming Partnerships-Organizational Boundaries	Discuss/ Deliberate	Reflect/ Assess	Act/ Initiate
Is there corporate proprietary information that needs to be protected?	☐	☐	☐
Can the proprietary information be protected while allowing knowledge transfer? How can these concerns be balanced?	☐	☐	☐
Is there a clear understanding of all partners' respective missions?	☐	☐	☐
How permeable are the boundaries between each partner organization?	☐	☐	☐
Who is the appropriate individual within each partner organization to bridge organizational boundaries?	☐	☐	☐
What are the skills and experiences needed for the partners to have to function well in these relationships?	☐	☐	☐
Is there a senior leader among each of the partners who can endorse the partnership and facilitate knowledge sharing?	☐	☐	☐

Email:
RAYMOND.MCGHEE@SRI.COM

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Workforce Instruction Features Evidence Framework

Industry-Community College Partnership: What Research Shows

- More than ever before, the slow U.S. economy requires workforce educators to open up their programs to closer collaborations with industry partners
- Our NSF-sponsored research of several Advanced Technological Education (ATE) Centers and projects characterizes common **Workforce Instruction Features.**
- These features may be used for systematic review of workforce instruction programming, which is useful for program design and evaluation, and coordination with institutional researchers, industry advisors, prospective funders, and accreditation self-study panels.

Directions for use:

1. Rate how much each workforce instruction feature is relevant to any given course (high, medium, low):
   a. Ratings will vary by course level (i.e., beginning, advanced). local industry needs, and local student preparedness
2. Use these ratings to:
   a. Flag where to **adapt instruction** for less prepared students (i.e., those that require developmental education or lack a STEM background)
   b. Provide descriptive data on **academic rigor** according to course level (i.e., beginning, advanced), whether students are mainly learning terminology/basic procedures (low) or learning how to apply knowledge to changing real worked problems (high), and according to how complex the problems are that students must solve. This information may be helpful for accreditation reviews and contextualized instruction programming.
   c. Provide descriptive data on the **industry relevance** of instruction according to how current it is, how aligned it is with industry standards, and how realistic the course hands-on activities are. This information can be used for industry advisory review and discussions and industry accreditation.

Email:
LOUISE.YARNALL@SRI.COM

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STEM Workforce Instruction Features Snapshot

ATE RESEARCH

- Flag course content and activities requiring customized approaches for basic students
- Characterize industry relevance of class content and activities to demonstrate program alignment with industry needs
- Characterize academic rigor of class content and activities for accreditation review

Key STEM Workforce Instruction Features	Rating Level			Instruction Feature's Issue Relevance High = Dark; Moderate = Light; Little = White		
	High	Medium	Low	Basic Students	Industry Relevance	Academic Rigor
1. Required level of knowledge in math, science, or technical fields to succeed in course						
2. Level of reading and writing required in the course						
3. Opportunity to practice basic skills and procedures						
4. Opportunity to practice "hands on"/"realistic" workplace skills						
5. Opportunity to practice workplace problem solving or troubleshooting (individual)						
6. Opportunity to practice workplace problem solving or troubleshooting (team)						
7. Opportunity to communicate, explain, or justify solutions						
8. Use of "recall" assessments (multiple choice, true-false, fill in the blank, label the diagram)						
9. Use of "performance" assessments (problem solving, troubleshooting, assembly)						

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