


The Impact of ATE Centers on Their Home Institutions

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Why Local Impacts?

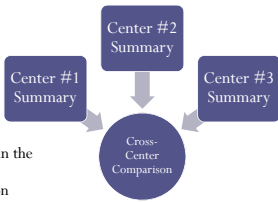


- Housing a national ATE center is a big commitment for an institution. Knowing about likely local impacts can help in that decision-making process.
- Awareness of possible impacts can help existing and future national ATE centers optimize impact.
- Centers that have a strong positive impact on their home institutions are more likely to have core center activities and products institutionalized and/or sustained.

Data Collected

- Site visits (~1.5 days each) with three mature national ATE centers varying in technical discipline and geographic location
- Interviews (N~15 per site) with center staff, administrators, and other faculty/staff
- Interview questions focused on:
 - Potential impacts
 - Most important impacts
 - Structural Impacts (e.g., changes to the curriculum and pedagogies, changes in policies, changes in budgets)
 - Attitudinal and Cultural Impacts (e.g., changes in the ways groups or individuals interact with one another, new relationships with stakeholders)
 - What makes the center was successful


Analysis



- Interviews Transcribed
- Themes identified
- Summary for each center
 - Brief history
 - Organizational structure within the institution
 - Knowledge about the center on campus
 - Direct and Indirect Impacts
 - Diversification
 - Sustainability
 - Why is the center successful?
- Cross-Center Comparisons

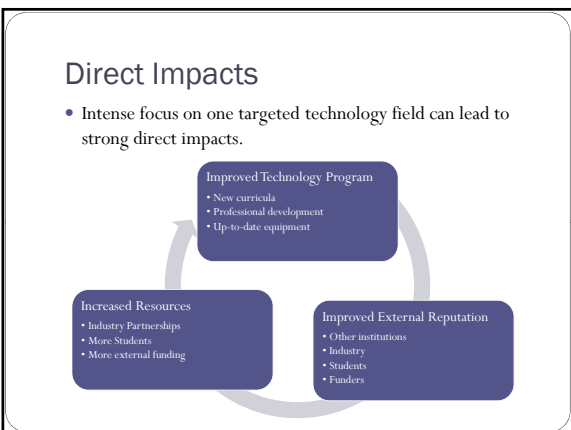
Results - Impacts

- Direct – Impacts related to the improving technical education in the targeted discipline
- Indirect – Impacts beyond the targeted discipline



Direct Impacts

Description of Impact	Center #1 (N=18)	Center #2 (N=13)	Center #3 (N=17)
Improving the quality of programs in the targeted technology field	N=14	N=8	N=15
Creating partnerships with industry and/or professional societies	N=5	N=2	N=13
Providing faculty professional development	N=5	N=2	N=10
Aiding in acquiring additional external funding	N=5	N=1	N=8
Increasing the number of students	N=8	N=1	N=4
Improving instructional technology	N=7	N=1	N=2
Assisting in transfer arrangements with four-year institutions	N=3	N=1	N=5
Producing high quality curricular materials		N=4	N=13
Improving external reputation of program	N=3		N=2
Creating new degree program		N=2	



Indirect Impacts

Description of Impact	Center #1 (N=18)	Center #2 (N=13)	Center #3 (N=17)
Contributing to host institution's ability to obtain other grants	N=8	N=9	N=9
Increasing the prestige of the host institution and enhancing its reputation	N=11	N=7	N=4
Having a positive impact on non-technical curriculum		N=10	N=4
Enhancing non-technical programs' ability to network and create relationships with outside groups		N=4	N=5
Improving working condition policies for "soft-money" employees			N=2

Correlations With Impacts

Impacts	Center #1	Center #2	Center #3
Intensity of Direct Impacts	High	Medium	Medium
Intensity of Indirect Impacts	Low	Medium	High

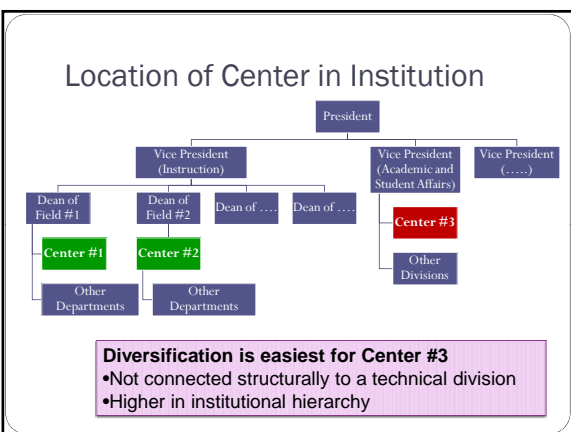
Characteristics	Center #1	Center #2	Center #3
Location of Center	Department within academic division	Department within academic division	Department within service-oriented division
Who does center director report to	Dean of the academic division <small>(Dean has strong ties to center)</small>	Dean of the academic division	Vice President of the division
Structural connections to a technical discipline?	Yes	Yes	No
Diversification	Low	Medium	High
Industry Connections	High	High	High

Diversification Increases Indirect Impacts

- Diversification Leads to strong Indirect Impacts
 - Partnerships and collaborations with other groups on campus
 - These often do not occur naturally and need to be fostered (e.g., grants network)
- In all three cases, additional diversification was seen as desirable
- Lack of awareness of center on campus may limit diversification
 - Estimates of the percentage of groups who know at least a little about the center were low in each case:

	Center #1	Center #2	Center #3
Administrators	83%	91%	51%
Faculty	34%	34%	23%
Staff	35%	32%	9%
Students	8%	6%	7%

- Efforts to increase local branding may help



Why is a Center Successful?

- Strong partnerships with industry
 - Access to new ideas and equipment
 - Keep center on cutting edge
- Qualities of center leaders (PIs and directors)
 - Vision, ability to communicate, network, lead, collaborate, and manage
- Culture of the host institution
 - forward-thinking, creative, risk-taking, innovative, fostering collaboration
 - All three institutions were among the 19 "Board Member Colleges" of the League for Innovation in the Community College.

Maintaining Impacts

(after ATE funding ends)

- **Institutionalization** refers to maintaining aspects of the center activities as part of the ongoing activities of the institution
 - For example, maintaining revised course structures or programs.
 - These continue to have a positive local impact, but in most cases do not continue to innovate.
- **Sustainability** refers to maintaining major center activities after the end of the funding period
 - All three centers, at one point, envisioned being sustainable by selling curricular products. All three have recognized that this is an insufficient model.

Core Competencies

Another way to think about maintaining impacts

- Core competencies are the tacit and explicit learning that has accumulated in the center during its operation.
- We propose that centers identify and purposely develop their core competencies that can then be applied to other projects that benefit their host institution
- There are at least two ways that these competencies can be leveraged
 - The center is maintained as an entity within the college and develops collaborative projects with other parts of the college.
 - Some aspects of the center are incorporated into other parts of the college.
 - For example, a center that has developed significant competencies in faculty professional development may have key staff and resources (i.e., core competencies) incorporated into existing institutional professional development infrastructure

Summary

- National ATE Centers have many valuable impacts on their host institutions:
 - Direct (e.g., significantly improving the quality of programs in the targeted technology field)
 - Indirect (e.g., contributing to the institution's ability to get other grants)

To Increase Impacts

- Direct
 - Increase depth of focus on and connections to the targeted technology field
 - Strong industry connections
- Indirect
 - Diversification through collaborations with other projects on campus
 - Consider location of center in institutional structure
- Sustaining Impact
 - Develop and articulate core competencies that are valuable to the institution

Feedback Welcome

- More details on this project can be found in a white paper available at:
 - <http://www.colorado.edu/ibs/decaproject/pubs>
- Send feedback to:
 - Charles.Henderson@wmich.edu