

Innovation and Replication

Can Community College Successes Be Repeated?

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Some rural community colleges have engineered effective partnerships to reverse declining local economies by sponsoring innovative training and other practices. The small scale and isolation of many rural community colleges can be overcome by replicating successful and creative practices from elsewhere, thus adding to a network of innovative and locally rooted colleges.

Small entities of any kind—whether businesses on Main Street, rural governments, or rural community colleges—benefit by banding together and learning from each others' mistakes and successes. Successful programs at rural community colleges, such as the ones described in this article, could take root at other community colleges if the right conditions exist.

What improves the likelihood of a program's successful replication? Replication is never exact, and can occur two ways. First, the underlying idea or solution can be repeated but carried out differently. For example, in a rural area without a major employer, a focus on training in entrepreneurship may boost the local economy. Entrepreneurial education would be the program to replicate, but the approach might be tailored to the new school's surroundings. Second, elements of a successful program can be duplicated to reach a different goal. For example, creating an alliance between the college and local organizations would advance virtually any goal that benefits the local

area. In this instance, it is the process and mechanisms that are replicated, not the program.

Drawing from benchmark practices at rural community colleges as identified through USDA's Fund for Rural America project, this article presents innovative activities at rural community colleges that improve local economies, and analyzes factors affecting their replicability by other colleges.

Community Colleges Are Important to Rural Economic Development

Rural America is struggling to build and sustain the competitiveness of local industries at a time when requirements for advanced technologies and skills are increasing. In the recent past, industries chose rural sites because of their low costs and available, nonorganized labor; these companies did not require access to advanced technology or skills. Today, economic and technological forces are shifting the factors that afford competitive advantage to higher levels of skills and technology. Rural 2-

year colleges are helping rural businesses (especially locally owned and small and mid-sized enterprises) and labor forces adapt to the new economy.

Community and technical (2-year in the U.S.) colleges have vast experience in delivering innovative services, education, and training to rural industries to help them modernize. Because 2-year colleges are less ensconced in tradition and are not as bound by State requirements as most 4-year institutions, they are freer to respond to market demands and conditions. As a recent issue of the Appalachian Regional Commission's quarterly magazine noted, "Community colleges refuse to be typecast. They repeatedly learn to play new roles...they provide windows to the world outside their open areas and—at least those under strong leadership—consider it a moral imperative to serve as agents of change" (Baldwin, p. 4).

More specifically, the college practices that reinvigorate communities include those that:

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- Represent creative alliances with businesses, other educational institutions, or related agencies;
- Overcome skill shortages, allowing businesses to operate at capacity and/or expand;
- Provide displaced, underemployed workers or youth a second chance;
- Bring new information about technology, markets, or better business operations to small and mid-sized firms;
- Encourage or support entrepreneurship;
- Raise productivity by improving technical education programs;
- Enhance links with and knowledge of the international economy.

Many administrators and faculty at community colleges are isolated from innovative practices, short of information obtained from regional meetings, conferences, and journals. Such information often lacks the depth, detail, and objectivity to support improvement and change. And this shortcoming particularly besets small, underserved, and rural community colleges.

Regional Technology Strategies, Inc. (RTS), an economic and workforce development policy organization located in Carrboro, NC, initiated a competition in 1998 to identify innovative and exemplary (benchmark) practices related to rural development at community colleges. This project is being conducted under the auspices of the Trans-Atlantic Technology and Training Alliance (TA3), a consor-

tium of 28 leading technical colleges in the U.S. South, Europe, and South Africa that supports exchange and innovation in technical education and regional economic development through collaborative projects, conferences, and research. RTS, along with Learning and Teaching Scotland in Glasgow, manages this alliance, begun in 1995 as an outgrowth of a U.S.-only network of community colleges called the Consortium for Manufacturing Competitiveness created by the Southern Growth Policies Board in 1988.

Guiding TA3 is the opportunity to observe and examine practices outside U.S. borders (particularly in other advanced industrial economies). For the same reason, the Fund for Rural America project chose to focus not only on successful practices in the United States, but also on those undertaken in other nations by institutions most closely resembling community colleges. These include, for example, Further Education colleges in the UK, Institutes of Technology in Ireland, technical colleges in Denmark, and vocational schools in Austria.

For the Benchmark Practices for Local Economies competition, colleges could nominate their own program or outside organizations could do so. The 6-month nomination process occurred through economic development and community college conferences and meetings, announcements on numerous listserve newsletters, direct mail to heads of State community college systems, and an advertising campaign in *Community College Times*. RTS sought international nominations through contacts with education ministries, European Union officials, and two European-based education and economic develop-

ment consultants. RTS received 122 nominated practices at community and technical colleges, including some from colleges in countries as far flung as Iceland and New Zealand.

Factors Affecting Successful Replication

Programs Can Capitalize on the Area's Natural Environment

Many rural community colleges are in remote places, making it difficult to attract both commuters and manufacturing concerns that require frequent shipment of goods in and out of the area. Yet the same areas are often rich in natural renewable resources, such as fish or timber. A community college can strengthen the local economy by designing a program to increase the local area's proportion of total revenue generated by this resource.

Inverness College, located in the Scottish Highlands (a region threaded with rivers and surrounded by the sea) implemented a program to increase the local residents' share of the fish farming industry. The program also facilitates college attendance for the residents in the college's catchment area.

Students in Inverness' aquaculture program participate in onsite training as an employee of a fish farm and online training with an Internet-based learning site they can access from home. For those without Internet access, the course is also available on CD. The program's design reduces lost manpower for the employer and lost income for the employee, while providing training specific to the industry as well as training in computer skills. Completion of this competence-based program results in a nationally recognized certificate, increasing a student's career

How Benchmark Practices Were Chosen

RTS has identified benchmark practices, not benchmark colleges. Few (if any) colleges do everything well. And indeed most colleges excel in at least one area. The intention here has been to find a discrete program or initiative within a community college that has demonstrated a profound effect on nonmetro areas in terms of innovation, sustainability, scale, and local support/partnerships.

“Benchmark” practices were selected in a two-stage process. Based on information provided by the colleges, a panel of economists, community college executives, policymakers, and rural development specialists selected 62 out of the 122 nominated practices to investigate further for possible inclusion in the final compendium. After this first cut, RTS conducted telephone interviews with three references for each program who were either partners, customers, or funders of the college practice in order to validate program outcomes. RTS also requested additional supporting documentation of program impacts, press coverage, etc. from each of the colleges. The panel met again to consider these additional data and selected 43 as “benchmark” practices. RTS will publish (in hard copy and on the web) brief case studies of each of these practices, plus more indepth case studies of seven of the most interesting ones in 2001.

This project enables other colleges to replicate, in part if not in whole, elements of noteworthy practices. By identifying the contexts and environments (economic, natural, structural, etc.) conducive to such innovation, aspirant colleges are better able to assess and adapt practices.

To provide this “richer” context, the case studies include data about the community in which the college is located and address replicability issues. Further, the final compendium of benchmark practices will cross-classify practices according to the type of economy in which they operate (e.g., primarily agricultural, manufacturing, or natural resource-based), geographic location, and program target, so that college staff and others may more easily find matches for their own circumstances.

options and chances for advancement. The program could be easily modified according to other industry standards.

Entrepreneurial Training Eases Loss of a Large Employer

The loss of a single large employer or the decline of an industry sector can create a sharp economic downturn in a rural area. Attracting a new large employer to fill the void is not easy. A community college program that teaches entrepreneurial skills can enable

students to earn an income independently and can instill flexibility in a workforce.

Stanly Community College in North Carolina rose to this challenge, with the decline of the textile industry, by targeting underskilled and underemployed residents with entrepreneurial interests. Stanly adapted the Rural Entrepreneurship through Action Learning (REAL) program, which originated in Georgia and North Carolina. Stanly’s REAL program grounds a student in market analysis, business

plans, and target population studies, then provides the opportunity to apply for short-term loans to launch the intended business. Since 1993, REAL graduates have established more than 30 new businesses in Stanly County.

Community College and Local Industry Alliance

Industries in rural areas throughout the United States have cited lack of adequate training as undermining the local labor force. Community colleges that join forces with a local industry to develop courses and offer apprenticeships can improve both a student’s learning and earning capacity.

Great Basin College in Nevada energized the regional economy by helping a network of mining companies train local technicians to modernize operations and reduce waste. The partnership has lasted for a decade, testimony to the benefits the industry has realized by cultivating a high-skill labor pool rather than importing technicians from eastern coal mining areas. While the focus of the program is mining, some graduates have secured employment in other industries such as manufacturing and construction.

The mining industry’s and the college’s ability to tailor the program to evolving needs has been crucial to its endurance. The most significant changes have been altering training schedules so that companies are not left short-handed and expanding training from industrial maintenance to diesel, electrical, and welding technology. Similar partnerships could be set up to support any industry cluster in a remote area.

Community Partnership in Planning

In rural regions with a declining economy, often the local workforce has already lost its most highly trained members. Halting the workforce decline requires training or retraining the remaining workforce as well as the youth approaching working age.

Community businesses and local organizations that work with lower-skilled residents each have a stake in turning the local economy around. A community college can enrich such a program by partnering with businesses and other community-based organizations from planning to placement.

Hibbing Community College in Minnesota created a successful Information Specialist and Workplace Skills Upgrade program by teaming with community groups—such as a public housing organization and a family investment center—knowledgeable about people needing training, as well as local businesses in need of trained employees. The program tailors training opportunities to the needs of local businesses and produces a specialized workforce attractive to similar businesses considering relocation. By partnering with local community agencies, the college's offerings are more accessible to its nontraditional students.

This very outreach makes local investment in Hibbing's program attractive, fostering its continuation and ongoing improvement. A community college with faculty expertise in the selected training areas can replicate Hibbing's success by creating strong local "stakeholder" partnerships to help guide the program.

Structural Elements Can Affect Replication Efforts

Quality of Leadership Plays Important Role

College leadership and the personal strengths of key personnel play a large role in the success of any program. When a college president makes an institutionwide commitment to a practice and commits resources to help ensure results, there is a greater likelihood of success.

With two major plant closings in 5 years, North Carolina's Haywood County was facing economic decline in the early 1990s. But despite ongoing economic distress in surrounding counties, the county has held its own, in part because of Haywood Community College's Entrepreneurial Learning Initiative. This program applies entrepreneurial ideas to all of the college's curricular programs and encourages the development of small business enterprises. Between 1990 and 1998, two-thirds of the graduates of the professional crafts program started their own business, and 88 percent were still in operation. The collegewide program has spawned a regional entrepreneurial resource center, an annual entrepreneurial conference, a network of entrepreneurs that cross regional boundaries, and a quarterly entrepreneurial newsletter.

This comprehensive reach stems from the college leadership's commitment, a commitment that also infuses college actions with entrepreneurial principles. College leaders help staff, faculty and students think and act as responsible, proactive, interdependent entrepre-

neurs. The goal is making entrepreneurship not just a program but a mode of operation for the college.

State System Influences the Nature of Replication

Replication efforts can be hampered or fostered by the State system in which a college operates and by its governance structure. Some community colleges are autonomous within their systems and enjoy leeway to enact programs and undertake initiatives independently. Others are more tightly linked to the State community college system and have less independence—particularly fiduciary independence. However, with respect to innovation and replicability, there can be advantages to both situations.

A tightly linked community college system (such as that in Colorado, New Hampshire, or Georgia) means innovations are more quickly replicated and increase in scale. For example, several community colleges in Colorado jointly piloted an e-commerce training program for businesses. The timeframe for the program's development was quite short; however, colleges pooled resources by working together. Other community colleges in the State have already adopted the resulting training program, particularly in rural areas where businesses are less aware of the Internet's utility.

Conversely, colleges that are more autonomous (such as those in Ohio, North Carolina, and Texas) have more flexibility to respond to local needs and to assume nontraditional roles. For example, Hocking College, a public 2-year

college in southern Ohio, offers innovative and leading-edge curricular programs. The college president has discretion to start and end programs without State approval and he has frequently done so. The college has recently initiated programs such as ecotourism, aquaculture/fish hatchery management (which includes a college-run fish farm), archeology, global positioning systems, and geographic information systems, all of which are very rare among 2-year colleges. The college is using these programs to help establish competitive niche industries within this heavily forested rural area, particularly in the area of ecotourism. Hocking is also very active in downtown revitalization and other community initiatives.

Funding Scarce for Sustaining or Replicating Innovative Programs

Finding money to sustain or replicate innovative practices is often difficult. Frequently colleges can successfully compete for outside money to seed a new project or idea, but this money soon runs out, and a practice is then expected to be self-sustaining or the college must obtain other support. Once a project can no longer be called a “pilot” project, funding is usually based on the number of full-time students or its equivalent, which is low at small rural colleges. Replication efforts also require funding. Replication can involve innovation, and by adapting the basic program, such efforts support sustainability and can create a more widely useful tool of economic development.

The benchmark practices compendium (to be published in 2001) illustrates the ways that some colleges are supporting sustainability. Two common scenarios for sustain-

ability are obtaining strong local business support and fee-for-services. For example, when a 2-year grant from the Ewing Kauffman Foundation to Mississippi’s Meridian Community College to start its JumpStart entrepreneurship program for minorities ended, college leaders convinced local business leaders to fund the program. At Hagerstown Community College’s Technical Innovation Center in western Maryland, the business incubator with shared manufacturing facilities became self-sufficient after 2 years through aggressive marketing and comprehensive services that are attractive to startup companies.

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In these instances, the program or service has an immediate and concrete value. Securing funding for programs whose outcomes are long term, of a more public nature, and/or harder to measure remains problematic.

Replication Can Refine and Improve Programs

Through successive replications in different settings, an underlying program model arises, with a struc-

ture and a set of goals that can be adapted by other community colleges. For example, 3 of the benchmark practices named in our group of 43 are based on a national program, Rural Entrepreneurship through Action Learning (REAL), yet each is successfully adapted to meet particular local needs.

In North Carolina, Stanly Community College used the REAL model to reverse the decline of the textile industry and build the local economy from within by retraining the workforce with skills that foster independence and flexibility. Also in North Carolina, Haywood Community College is implementing the REAL program across the college’s entire curriculum, as described earlier. At Elizabethtown Community College in Kentucky, the REAL model was incorporated into the State’s School-to-Work program, showing middle-school children the relevance of education, familiarizing them with postsecondary education, and introducing them to entrepreneurial career paths.

The many versions of the REAL model and their success prove that some programs actually lend themselves to replication. And with evidence of the model’s success in other regions, potential investors can be more confident that the proposed project will yield results.

Policy Lessons

It is evident from the diversity and scope of innovative practices that community colleges can be effective catalysts for economic and workforce development in rural communities. However, barriers and shortcomings in terms of resources and access mean that innovation, and hence replication (since replication is based on there being innovative practices worth

imitating), is too rare. What can policymakers do to foster innovation among rural community colleges?

Increase resources.

Community colleges are greatly underfunded in most States. Funding the improvement of facilities, increasing faculty pay (and thereby attracting better faculty), and initiating responsive programs would help spur innovation.

Create an innovation fund.

In 1997, the North Carolina Rural Center held a competition for rural community colleges to fund projects that spur economic development in their regions. Resulting projects included working with a group of firms to create a joint training program to improve worker readiness for local companies, imbedding entrepreneurial content in an electronics program, and bringing together local companies in a network to identify common issues for joint actions.

Support college networking.

Sponsoring conferences, writing case studies and articles about innovative activities, and creating more forums for community colleges to interact encourages peer learning and replication. A more formal networking structure is to designate and fund certain colleges in a State as Centers of Excellence (preferably through a competitive process) either for a particular industry (electronics, metalworking, information technology, etc.) or for a specialty such as distance learning. While the center would take the lead on developing new initiatives and act as a statewide resource, it should have specified

partner colleges with which it shares expertise and resources. Alabama uses this approach, and North Carolina is considering it.

Encourage links with local stakeholders.

Policymakers should consider incentives for colleges to engage local businesses, economic development specialists, and community groups in their activities. Alliances among local stakeholders leverage resources and ensure responsiveness to an area's particular needs.

Use community colleges as hubs for information technology (IT).

The "digital divide" between rural and urban areas is immense. Most States are grappling with approaches to make sure rural areas are not left behind. Community colleges, often the only higher-education option in a rural area, can narrow the gap, and indeed many benchmark practices involve IT. Roles include hosting hard infrastructure, such as being a node for broad bandwidth access to the Internet and brokering services to local businesses, and providing

IT skills to new and incumbent workers. Rural colleges can use IT to great advantage in distance education.

Conclusions

The networks generated when one college repeats another college's program can reduce the effects of small scale and isolation felt by many rural community colleges. Replication is an efficient way for small colleges to create effective programs for their area.

Connecting with other colleges and envisioning solutions used in other economic environments are also activities that spawn ideas for one's own environment. Many forms of replication are innovative in their own right. Adapting a program created to address one situation so that it is just as effective in another setting is itself a creative process. Such adaptation pushes those who are planning a replication effort into an area of broader consideration and scope, setting the stage for a continuous loop between innovation and replication. **RA**

For Further Reading . . .

Fred D. Baldwin, "Appalachia's Best-Kept Secret," *Appalachia: A Journal Devoted to Regional Development*, Vol. 29, No. 3, Sept.-Dec. 1996, pp. 4-11.

James R. Mahoney and Lynn Barnett, eds., *The Learning Edge: Advanced Technological Education Programs at Community Colleges*, Washington, DC: Community College Press, 2000.

Regional Technology Strategies, Inc. will publish *Cultivating Successful Rural Communities: Benchmark Practices at Community and Technical Colleges* in 2001. To order a copy when available, go to www.rtsinc.org.