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Joint Endeavors and Coalition Models

Metropolitan universities can overcome financial restrictions and opposition to expansion if they join with other higher education institutions and community agencies in cost-effective, cooperative efforts. The University of Missouri (UM)-St. Louis has added several academic programs and multidisciplinary centers in the last five years using this strategy. UM-St. Louis has found that cooperative efforts that link the campus with corporations, public schools, not-for-profit agencies, and other universities are viable options to free-standing programs. The best models have been suggested by faculty themselves and include cooperative administration and equal benefits to all parties concerned.

Difficulties in gaining approval and funding for some freestanding academic programs, as well as the realization that some activities benefit from a merger of complementary human and physical resources, have made joint endeavors among colleges and universities, and coalitions that primarily involve noneducational partners such as corporations and agencies, more attractive to metropolitan universities throughout the country. This is particularly true of the University of Missouri (UM)-St. Louis.

The leadership at UM-St. Louis had for years an understandable philosophical preference for freestanding academic programs. But the university faced numerous problems trying to advance some academic programs recommended by the faculty's governing body. Resistance was experienced from within the University of Missouri System as well as from other institutions that questioned the need for the addition of certain programs that had been proposed. This resistance often stopped UM-St. Louis from adding certain programs or greatly altered the program that was ultimately approved by the state's Coordinating Board for Higher Education.

For example, the university sought approval for a four-year, undergraduate program in nursing in the late 1970s. St. Louis is a regional medical center, and a needs assessment conducted for the university showed tremendous support for a nursing program at a public institution. The need for the program was questioned within the University of Missouri System and by an institution externally. Following extensive debate, the state's Coordinating Board for Higher Education approved only junior- and senior-level nursing courses at UM-St. Louis. Classes opened in fall 1981.

This experience, and others like it, convinced UM-St. Louis by the mid-1980s to change its approach to free-standing program expansion in certain areas. UM-St. Louis realized that opposition to some free-standing programs from the educational power structure within the region and state would be too great to overcome, so UM-St. Louis adopted a strategy of cooperation to expand its program offerings. The following sections will describe some of the results.

Joint Endeavors Rise and Fall

The University of Missouri System encourages its campuses to form cooperative programs, but it lacks specific guidelines for intercampus relationships. Thus, UM-St. Louis had to try several configurations—some of which have worked and some of which have not.

The first joint venture to bear fruit was a doctoral program in physics initiated with the University of Missouri-Rolla in fall 1988. This program helped strengthen the small but productive physics department faculty at UM-St. Louis, which, by itself, could not offer an avenue for the area's numerous employees of high-tech industries to pursue doctoral degrees in physics or conduct multidisciplinary research needed today to support high-tech industries. This program met those needs.

The cooperative physics Ph.D. program consists of a common set of required courses on both campuses, a common qualifying exam, and committees containing members from both departments. Students have the option of matriculating in one department and remaining there for their entire program of graduate study or of moving between campuses for particular seminar courses and thesis research. All student fees, student credit hours, and headcount for students attending the cooperative program at UM-St. Louis are retained by UM-St. Louis. UM-Rolla receives credit for admission and for granting a Ph.D. Dissertation committees also are based at UM-Rolla.

UM-Rolla physicists benefit from this program because it permits them to teach and conduct research in astronomy, high-energy physics, and other areas that are strong at UM-St. Louis but not represented at UM-Rolla. For UM-St. Louis, this program allows its physicists to be involved in Ph.D. dissertations without increasing the size of the faculty beyond the minimum required to staff the courses.

Interestingly, this program developed from a strong friendship between members of the St. Louis and Rolla physics departments. The program was promoted by the faculty and not imposed upon them. UM-St. Louis has experienced much success in programs that bubble up from the faculty.

High-tech Joint Endeavor

Having experienced difficulties in securing an undergraduate nursing program, UM-St. Louis looked to UM-Columbia and UM-Kansas City to form a cooperative graduate program in nursing. Master's degree programs

existed at both UM-Columbia and UM-Kansas City. From these negotiations sprang the fully accredited UM-Kansas City/UM-St. Louis Cooperative Graduate Nursing program in 1989, which uses the University of Missouri System's new interactive telecommunications network. Students in St. Louis and Kansas City attend classes in studios located on each campus. The teaching load is shared equally by faculty in St. Louis and Kansas City. The program consists of 36 semester hours. Criteria for admission are identical to those attending the School of Nursing at UM-Kansas City, and the graduate degree is granted by UM-Kansas City. UM-St. Louis retains student fees.

The excitement that this cooperative effort generated was extraordinary. It offered numerous practicing nurses in the eastern half of Missouri access to a reasonably priced graduate program, and it offered the university its first experience with instruction through new video technology.

Public-Private Joint Endeavors

UM-St. Louis has joined with Washington University to establish a Joint Center for East Asian Studies. The center strengthens programs at both institutions by combining faculty, library, and research materials. This provides students with access to scholars with strengths in the humanities, social sciences, and law—a combination that did not exist separately. The center also provides the St. Louis business and law communities a better resource for support, and gives each institution better standing when seeking external funding. The center, established in fall 1991, already has received $195,000 from the U.S. Department of Education to support graduate fellowships over the next three years.

Initial instruction through the Joint Center for East Asian Studies will involve Washington University faculty teaching Chinese and Japanese courses to students from both campuses at the UM-St. Louis campus. The students will pay the tuition and fees of their home institution. In subsequent years, UM-St. Louis faculty will teach East Asian social science courses at Washington University.

The center is administered by codirectors, one from the Center for International Studies at UM-St. Louis and one from the Asian Studies program at Washington University. A faculty committee, under the guidance of the codirectors, sets center goals and policies. A community advisory board assists with long-term planning and fund-raising.

Freestanding Joint Endeavors

The quest by community and business leaders to secure undergraduate engineering education courses at UM-St. Louis dates to the opening of the campus in 1963. The nearest public engineering program in Missouri was more than 90 miles from St. Louis, which made an engineering degree for a student bound by either geography or economics impossible.

In 1989, UM-St. Louis worked out a cooperative agreement with Washington University that would allow UM-St. Louis to operate an engineering program using Washington University's facilities and faculty at night. In essence, UM-St. Louis would rent the Washington University engineering program, but all degrees would be offered by UM-St. Louis. This plan was never formally approved. Instead, an agreement to offer undergraduate courses in mechanical and electrical engineering at UM-St. Louis was arranged with UM-Rolla.

Since the late 1960s, UM-Rolla has maintained a graduate engineering center on the St. Louis campus. During this time, UM-St. Louis independently developed pre-engineering courses. Under the arrangement developed by UM-St. Louis and UM-Rolla in December 1990, the graduate programs, the pre-engineering program, and a new undergraduate program were combined to form the UM-Rolla / UM-St.Louis Cooperative Engineering Center. In May 1991 the Missouri General Assembly earmarked $1 million for the St. Louis engineering effort, and the center began offering undergraduate courses in January 1992.

State appropriations, grants, contracts, student fees, credit hours, and student headcount are credited directly to the center. UM-St. Louis receives student activity and parking fees. The director of the center reports to the chancellor at UM-Rolla, but the director holds a joint appointment at both campuses. Also, faculty in the center hold joint appointments. Diplomas are signed by chancellors at both campuses.

The center has received tremendous support from the St. Louis community, with over $1 million raised for scholarships and equipment to support the new engineering venture. UM expects that over 1,000 students will be enrolled in the four-year engineering program by the year 2000.

Practice-Makes-Perfect Model

Among these different cooperative arrangements, one appears to stand out as a model—a cooperative Ph.D. in nursing with UM-St. Louis, UM-Kansas City, and UM-Columbia. The nursing faculty on each campus felt a need for a doctoral program in nursing but realized that no single campus possessed the resources to develop an independent program. Together, they have forwarded a proposal that unites curriculum and faculty to create a cooperative Ph.D. program available on each campus.

The faculty of the three campuses are merged, and as a group, develop rules and regulations to govern the program. A coordinating committee consisting of members from each School of Nursing will serve as the infrastructure for conduct of the degree program.

The student's primary campus will be based upon the location of his / her major professor. The faculty serving on the dissertation committee must represent all three campuses, but the majority of the committee members come from the primary campus. The primary campus also is the campus where the doctoral student completes residency. The cross-listing and telecommunication of courses provide the opportunity to take nursing courses on the other campuses even during residency.

This is a very attractive model for cooperative efforts because it is extremely cost effective—combining faculty through telecommunication technology—and it avoids many of the turf battles that crop up from cooperative agreements. All credit hours, student fees, appropriations, and headcount are controlled by the home institution. And the faculty—who have initiated the program and will control its rules and regulations—are fully supportive of the effort. Students benefit because they are exposed to the faculty strengths of each campus and are provided more options in selecting locations to serve residencies.

The Ph.D. in nursing program proposal has been approved by the Board of Curators of the University of Missouri System and is pending review by the state's Coordinating Board for Higher Education.

Coalition Models

The benefits of coalitions between the university and noncollegiate partners extend well beyond monetary concern: Each coalition creates a bridge for community participation. Urban universities were created to serve the urban community, and there is no better way to show the community this than through a coalition involving people and organizations off campus.

UM-St. Louis is involved in coalitions with dozens of corporations and noneducational agencies in efforts that improve educational opportunities and the overall condition of people living in the region. Many efforts mirror those in other urban communities; some are truly innovative. The most notable of the latter are UM-St.Louis's precollegiate programs, the International Center for Tropical Ecology, and the St. Louis Historical Research Center.

Coalitions That Reach Out to Help

In response to the critical need for improvement in educational opportunities for youth at risk, UM-St. Louis has joined with corporations to enhance academic programs directly in St. Louis-area middle and secondary schools. The American Council on Education gave this effort the 1990 Anderson Medal as the nation's best alliance among public schools, businesses, and universities.

The primary goal of these programs is to improve educational opportunities for precollegiate students and to increase the number of students who continue their education at the college and university level, particularly in science and math. The programs also seek to heighten the quality of instruction in the schools through interactive staff development and applied research programs involving teachers from the schools and university faculty members. Another objective is to improve preservice teacher education through direct involvement of advance teacher education students, who serve as tutors.

Four school districts are deeply involved in every phase of the programs. These districts have minority enrollments ranging from

72 percent to 100 percent. In addition, more than thirty-five senior high schools from over twenty area school districts are now involved in at least one element of the program. As an essential partner, the corporate sector has provided financial support and has supplied executives and other professionals to serve as mentors, speakers, and sponsors of special events. Corporations also provide relevant part-time summer employment for eligible students.

The two efforts that were recognized by the American Council on Education were UM-St. Louis's Access to Success and Bridge programs. The primary goal of the Access to Success Program, which enrolls about 1,400 students, is to prepare middle school students for success at the high school level. The Bridge Program, with an enrollment of nearly 2,000, strives to provide a solid connection between the high school student and some aspect of university life.

Access to Success provides stimulating opportunities for middle school students, most of whom are disadvantaged African-Americans, to improve their skills in science, math, and communication. It serves as a natural foundation for students to move into the Bridge Program. Access to Success has eight key components:

- *Science/Math/Computer Clubs.* Students attend weekly after-school meetings and complete an array of math-, science- and computer-related activities directed at increasing confidence in their ability to understand and tackle projects in these areas.
- *Saturday Academic Academies.* These intensive, voluntary eight-week programs, which operate during the fall and spring semesters, seek to motivate and prepare sixth through eighth graders for high school study in math, science, and technological fields and aid them in identifying career paths and goals.
- *Counseling Program.* Staffed by UM-St. Louis graduate-level counseling students, this component of the Saturday Academies features individual and group sessions on self-esteem, goals setting, problem solving, role models, study skills, and career planning.
- *Weekday Tutoring Program.* Staffed by UM-St. Louis teacher education students, this in-class tutoring program provides a foundation that ensures that the Access program thrives.
- *Expanded Community Education Link (ExCel).* Through the financial support of local municipalities and small businesses, ExCel provides a minimum of 15 hours of one-on-one comprehensive tutoring by teacher education students for underachieving Access students.
- *Access Resource Center.* This is a resource room in a participating school, which houses remedial and enrichment learning stations in science and math.
- *On-Campus Learning Events.* Each term, a number of Access students are invited to the UM-St. Louis campus for planned activities and demonstrations in science, math, computing, and language arts presented by university faculty and students. This is usually the children's first visit to a university campus.

- *Summer Programs.* During the summer, the clubs continue to function with UM-St. Louis campus enrichment programs in science, math, and computing, and field trips to places such as the St. Louis Science Center, the zoo, the Missouri Botanical Garden, the Illinois State Museum, and Camp Wyman, where scholarships fund outdoor experiences for eleven days.

The success of Access is reflected in an empirical correlation between better scores received by eighth graders taking the Missouri Mastery Achievement Test and their participation in the program. Access students also are registering higher levels of self-esteem. Prior to the Access tutoring experience, 28 percent of the students felt they would never go to college. After completing the six Saturday components, 94 percent felt they had a chance to go to college. Access is providing UM-St. Louis teacher education majors with invaluable practical experience in multicultural settings. Teacher education students who participated as tutors were later considered by student teaching supervisors to have higher teaching proficiencies than student teachers who lacked the Access to Success experience.

The Bridge Program is no less effective in its approach to increase the number of minorities completing high school and going on to college; to increase the number of minorities who strive for careers in mathematics and the sciences; and to support math, science, and English instruction in participating schools. This program has seven key components.

- *Math/Science Clubs.* These clubs meet weekly at the high school under the leadership of a high school teacher to provide opportunities for students to conduct research projects, to participate in math and science competitions, to meet professionals in these fields, and to visit UM-St. Louis libraries and laboratories. University faculty coordinate the content of the activities of each club, and St. Louis-area scientists and engineers also participate in the club enrichment activities.
- *Advanced Credit Courses.* Taught by high school teachers with university adjunct status, these courses offer high school and college credits to selected students in English, political science, and history.
- *Tutorial Program.* Student tutors from the university, including science and math teacher education students, work an average of twelve hours per week in the Bridge high schools to assist students in math, computer science, communications, chemistry, physics, biology, and English.
- *Shared Resources.* This program acquaints high school students with the UM-St. Louis campus, faculty, and students through a range of extracurricular activities, including library tours, athletic events, concerts, and special workshops.
- *Saturday Math/Science Academy.* This is an intensive program offered on twelve Saturdays during the school year. Emphasis is given to math and science instructional enrichment, communication skills improvement, and career and personal counseling.

- *Summer Math/Science Academy.* During the summer, students have the opportunity to work on campus with UM-St. Louis faculty, staff, and students in areas such as biology, chemistry, physics, computer science, and mathematics.
- *Summer Link Program.* For high school juniors and seniors who have indicated a strong interest in attending college, the Summer Link Program offers enrichment in study skills, college placement test preparation, and employment opportunities with corporations throughout the St. Louis area. Students enroll in college credit psychology, biology, or freshman writing courses taught by regular UM-St. Louis faculty.

A significant percentage of students—93 percent in 1991—who participate heavily in the Bridge Program go to college, and more than half pursue mathematics-, science- or computer-related degrees. Many of these students chose to attend UM-St. Louis.

From the two high schools with the longest affiliation with the Bridge Program, nearly twice as many students began college in the fall of 1991 than entered in the fall of 1987, the year the program began.

An In-town Coalition of International Scope

When the University of Missouri-St. Louis decided in 1991 to create an International Center for Tropical Ecology, it needed to look no farther than across town to the Missouri Botanical Garden for a partner. The botanical garden and UM-St. Louis had been working together on related research projects for at least fifteen years, culminating in the creation of a cooperative Ph.D. program in biology in 1986. The Ph.D. program concentrates on evolutionary biology with emphasis in plant systematic and environmental studies.

The rationale for UM-St. Louis to initiate a Ph.D. program in biology was the unprecedented destruction of ecosystems throughout the world, including the United States and Missouri. The potential negative influence this destruction will have on the world's population prompted the National Research Council to make studies in ecological systems a top priority. For UM-St. Louis, study of this urgent problem could best be implemented through a cooperative arrangement between the botanical garden and the biology department.

The Missouri Botanical Garden has over thirty systematic botanists on staff, a major botanical library, and a herbarium of well over three million specimens. It is designated as the center for African studies in botany by the Association of Systematic Collections and has been active in botanical research in Latin America for over fifty years. The botanical garden maintains facilities in a number of tropical countries, including Columbia, Costa Rica, Cameroon, Peru, Nicaragua, Panama, Ecuador, Bolivia, and Madagascar.

The existence of a cooperative Ph.D. program made for an easy transition in developing an International Center for Tropical Ecology in cooperation with the botanical garden. The botanical garden's cooperation

added vital credibility to the new center and unmatched resources in St. Louis and around the world for advanced research.

The new center promotes educational and research projects in biodiversity, conservation, and sustainable use of tropical ecosystems. It seeks solutions to the global crisis arising from the destruction of tropical ecosystems. To that end, the center trains students from countries in tropical regions and from the United States to be leaders in the conservation movement.

The center provides scholarships to graduate students, sponsors student and scholar research projects, and maintains a public education program to stress the importance of global conservation. The public education program includes a World Ecology Medal, given annually to an individual who has been a leader in promoting environmental issues. Jacques-Yves Cousteau received the 1991 medal during ceremonies at UM-St.Louis.

The center is administered by a director from UM-St. Louis in consultation with an executive committee made up of UM-St. Louis faculty and researchers from the Missouri Botanical Garden.

Local Agencies Are Ripe for Coalitions

Most metropolitan areas have hosts of local historical, arts, and cultural agencies that offer great potential for research and teaching coalitions to benefit students and faculty and the greater community at large. UM-St. Louis has tapped that potential with an agreement with the Missouri Historical Society of St. Louis.

Jointly, UM-St. Louis and the historical society created the St. Louis Historical Research Center to sponsor the study of St. Louis's rich, historical past and to provide educational programs. Researchers from the historical society and the UM-St. Louis faculty will explore the society's extensive archival holdings to create publishable manuscripts and permanent exhibits on St. Louis, the Louisiana Purchase, and westward expansion.

The historical society and UM-St. Louis have committed money to maintain a permanent staff to operate the center and to recruit two researchers who have an interest in urban history. The researchers will be given appointments at the historical society and UM-St. Louis.

In a similar initiative, the St. Louis Historical Research Center agreement was used as an outline for a cooperative arrangement with the St. Louis Art Museum to split the cost of an assistant professor/assistant curator position. Through duties at both locations, the individual serves as a liaison to coordinate activities within the university's art department and the museum.

Partnerships Are the Wave of the Future

The issue of metropolitan higher education institutions joining with schools, corporations, local governments, and not-for-profit agencies to solve social and economic ills is a pressing topic in Washington, D.C.

today. Title XI of the Higher Education Reauthorization Act of 1992 addresses the need for urban higher education to take a lead in forming problem-solving consortiums. Specifically, section 1102 outlines the mission of Title XI: "It is the purpose of this title to provide incentives to urban institutions to enable such institutions to devise and implement solutions to pressing and severe problems in their communities."

Title XI will provide grants to metropolitan higher education institutions as incentives to work in partnership with the community at large. These grants will be helpful, but even without federal support, the benefits from forming partnerships with other higher education institutions and community organizations and businesses should be incentive enough.

Conclusion

Institutions that move swiftly to form joint endeavors and coalitions within their communities will provide better services to their students and neighboring residents. Those that remain isolated will miss one of the most sensible opportunities to connect the university with the larger community in a meaningful, useful way. However, the overwhelming drive to create a cooperative program should be because the need, not an opportunity, exists. Institutions should be wary of adding such activities if they do not satisfy a community need or fit within the institution's long-term mission, or both. Programs not meeting these conditions will be hard to maintain over the long haul and will divert resources and energy from more essential activities.

Once an opportunity for cooperation has been determined to fill community need and be within the university's mission, a campus president or chancellor should delineate to a dean, department chair, or lead faculty member the conditions under which the institution will enter into an agreement. The university's financial commitment and its need for at least joint authority within the project's governance structure should be clearly specified. A university can lose control over a program too quickly if it does not have a voice in its governance, including in particular some authority over the project's director or coordinator.

Finally, when arrangements have been agreed to by all the necessary parties, the terms should be put in writing. A signed, written agreement will help institutions avoid unnecessary confusion that could arise at a later date over financial arrangements, admissions standards, and a myriad other details.