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**Seeding Entrepreneurship
Across Campus:
Early Implementation
Experiences of the
Kauffman Campuses
Initiative**

Final Report

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EXECUTIVE SUMMARY

Entrepreneurship has long been a fundamental aspect of American society, serving as an important contributor of economic growth. However, only recently has entrepreneurship begun to develop as an academic field in U.S. colleges and universities, and entrepreneurship programs on campus are most commonly found in business schools. Because entrepreneurs and innovative ideas can arise from within any academic discipline, the Ewing Marion Kauffman Foundation has encouraged the expansion of entrepreneurship programs and activities campus-wide to provide educational opportunities in entrepreneurship to all students, regardless of their field. To this end, in 2003, the Foundation launched the Kauffman Campuses Initiative (KCI) in eight U.S. universities. The universities together received a total of \$25 million in five-year grants from the Foundation and committed to raising an additional \$75 million in support of their pledge to make entrepreneurship education available across their campuses.

To examine how the KCI grants were used, the Foundation contracted with Mathematica Policy Research, Inc. (MPR) to conduct an in-depth implementation study of the initiatives developed on the eight campuses. The study provides insight and documentation for other universities considering implementing campus-wide entrepreneurship initiatives and provides the KCI universities with feedback to help them refine their initiatives. Data collection for the study includes two rounds of site visits—the first in spring and fall 2005 and the second in spring 2009—that include focus groups with students and faculty and interviews with key program stakeholders. Also included in the study are two faculty surveys (in spring 2006 and spring 2009) and two student surveys (in the 2006–2007 and 2009–2010 academic years). This report provides a cross-site analysis of the universities' implementation experiences during the beginning of their KCI grants, based primarily on information collected during the first round of site visits and through the first faculty survey.¹

¹ MPR produced individual site reports on the early implementation experiences of each of the eight KCI universities.

THE KCI UNIVERSITIES

The eight recipients of the KCI grants were Florida International University (FIU), Howard University, the University of Illinois at Urbana-Champaign (UI-UC), the University of North Carolina at Chapel Hill (UNC-CH), the University of Rochester, the University of Texas at El Paso (UTEP), Wake Forest University (WFU), and Washington University in Saint Louis (WUSTL). The grantees are a diverse group. Half are public, half are private, and the eight are widely dispersed geographically. Enrollment at the universities ranges from 6,500 to 42,000 undergraduate and graduate students. All eight universities were engaged in some entrepreneurship-related activities before the KCI, but these activities were typically concentrated within their business schools.

MANAGEMENT AND STRUCTURE OF ENTREPRENEURSHIP INITIATIVES

The ways universities structure and manage their initiatives can have important implications for the development of entrepreneurship programs across campus. Each of the eight universities made different decisions about how to integrate the new initiatives into their existing operational structures, what types of university and community members to involve in overseeing and guiding them, and what resources to devote to them.

Integrating Entrepreneurship Initiatives Within Universities

To respond to the KCI goal of creating campus-wide entrepreneurship programs, the eight universities designed their initiatives to involve many different schools and other university units, though in different ways.

Organizational Structure of Entrepreneurship Programs. The organizational structure of the initiatives generally fit into two categories: decentralized and centralized. In decentralized initiatives, different schools developed their own entrepreneurship activities and courses independently. In centralized initiatives, most activities were designed to serve a broad range of students, and most decisions were made centrally, by the initiative leaders and advisory boards. The centralized model was more common among the KCI universities than the decentralized one, which was adopted by only two grantees. However, all eight initiatives had some centralized and some decentralized elements.

Involvement of Different Schools Across Campus. The initiatives involved a wide range of schools. However, not every school within the university was necessarily involved, nor did schools participate to the same degree. The business school and the college of arts and sciences were involved at all eight universities. Preexisting activities and traditional ties to entrepreneurship made the business school a natural partner, and the involvement of the college of arts and sciences, as the largest academic unit and the core of the university, was key in establishing a campus-wide initiative. Most KCI universities, however, went beyond these two schools to involve other schools and disciplines such as engineering, education, fine arts, health professions, communications, and law.

Collaborations with Other Centers or Offices Within the University. Some universities forged collaborations between their new initiatives and preexisting units within

the university, such as entrepreneurship centers and technology transfer offices. For example, some of these universities took advantage of the institutional expertise, space, and staff resources of existing structures on campus by locating their initiatives within these structures. Others located their new cross-campus initiatives elsewhere but partnered with these entities on specific activities.

Oversight and Guidance

The level of administrative support and type of involvement varied across the KCI universities. However, the entrepreneurship initiative at each was guided by university leaders and advisory board members who provided a rich range of perspectives, expertise, and assistance. University leaders at all eight universities officially supported the KCI, but some were more enthusiastic champions of the program, while others took a less active role.

Every initiative had an advisory board to guide and support its entrepreneurship programs, and several had more than one. Advisory boards composed of administrators and faculty typically included at least one representative from each of the involved schools. A major function of these interdisciplinary boards was to encourage cross-campus support—members championed the initiative and passed along information to their colleagues and students. Some universities had separate boards for different program areas or schools. Many also had boards composed of representatives from the broader community, such as community leaders, entrepreneurs, and social entrepreneurs.

Resources

For the initiatives to develop and survive, two main types of resources were necessary: (1) dedicated staff to plan, organize, and lead the entrepreneurship programs and activities; and (2) adequate funding to support the initiatives' staff and activities. The initiatives relied on several types of staff, including directors, faculty component leaders, and non-faculty staff. Directors led the initiatives and were ultimately responsible for all activities under the KCI grant. Faculty component leaders were senior faculty or school administrators who served as leaders of specific program components within the initiative. Their roles as initiative staff included developing programs and activities within their area, serving as champions within their home schools, and, sometimes, raising funds for their programs. Every KCI initiative also relied on full- or part-time non-faculty staff to perform administrative tasks at various levels. At some universities, a few of these non-faculty staff taught courses or even served as component leaders.

The Foundation provided the eight universities with a total of \$25 million over five years to support their entrepreneurship initiatives. The universities pledged to raise additional funds to match their grant amounts three to one. The single largest source of matching funds was support from the universities themselves, largely in the form of in-kind contributions. Other sources of funding included businesses, foundations, and individuals in the surrounding community; alumni; and state governments. Responsibility for fund-raising was typically shared between the initiative staff and senior university administrators who could approach potential donors and channel university funds. The initiative director bore

primary responsibility at about half of the KCI universities, and deans played an important role in fund-raising for some initiatives.

ENTREPRENEURSHIP PROGRAMS AND ACTIVITIES OFFERED

The KCI universities developed new entrepreneurship programs and expanded existing ones to create a broad range of entrepreneurship education opportunities for university students, faculty, and the surrounding community (Table 1). Developing entrepreneurship curriculum was a major component of the entrepreneurship initiatives. Other program components included co-curricular activities that support and develop entrepreneurial interests, faculty development activities, research opportunities, and community outreach.

Table 1. Summary of Entrepreneurship Activities Across the KCI Universities

Type of Activity	Number of Universities
Curriculum Development	8
New or revised programs of study for non-business students	6
New courses in entrepreneurship	8
Modified courses in entrepreneurship	6
Course development grants for faculty	6
Co-curricular Activities	8
Entrepreneurship clubs	8
Lectures and speakers	7
Workshops and seminars	6
Business plan competitions	7
Internships	6
Venture incubators	5
Research Opportunities	7
Grants for faculty research in entrepreneurship	5
Grants for student research in entrepreneurship	4
Research conferences and visiting scholars	5
Databases of entrepreneurship literature	2
Other Types of Faculty Involvement	8
Advocating for entrepreneurship in school	6
Leading program components	6
Serving on entrepreneurship committees or boards	5
Participating in on-site faculty development training workshops or meetings	5
Attending outside training in entrepreneurship	6
Community Involvement	8
Serving on boards	5
Raising funds	7
Teaching courses	8
Speaking	7
Judging competitions	6
Providing internships	6
Serving as entrepreneur-in-residence	3
Attending open events	7
Receiving training, education, and consulting services	5

Infusing Entrepreneurship into the Curriculum

Most of the KCI universities emphasized expanding the availability of entrepreneurship curriculum to engage students outside the business school. While many universities offered programs of study for business students before the KCI, six universities created programs of study for non-business students. One university created an undergraduate major in entrepreneurship, open to non-business students, within its business school. Of the four universities offering undergraduate entrepreneurship minors to non-business students, two house their new minors in their colleges of arts and sciences, and two minors—one new and one revised—are in business schools. Three entrepreneurship certificate programs are available—two (one for graduate students and one for undergraduates) in a business school and one in a music school.

Across the eight universities, faculty from various schools developed about 60 new courses in entrepreneurship across a wide array of disciplines. Another 30 existing courses were revised, including revisions to existing entrepreneurship courses and modifications to courses in other disciplines to incorporate entrepreneurial themes. Most of the new and revised courses were designed for non-business students, either tying entrepreneurship to a specific field or blending several fields together to demonstrate the interdisciplinary nature of entrepreneurship. Some courses focused broadly on the role of entrepreneurship in the economy and society. Others focused on developing students' entrepreneurial skills and teaching how to apply them, often through experiential learning opportunities.

In expanding the entrepreneurship curriculum to reach a broader range of students, universities faced three major challenges: (1) attracting faculty to develop and teach courses, (2) addressing the university's long approval process for new courses, and (3) overcoming procedural barriers to students' enrollment. The KCI universities implemented several strategies to overcome these challenges. First, the most common strategy for encouraging the development of entrepreneurship courses was to offer curriculum development grants or stipends to faculty. Second, some initiatives offered new entrepreneurship courses in a special "freshman seminar" course structure or under existing "special topics" course numbers. These methods, where available, enabled courses on new topics to be taught without first completing the full approval process required for a regular course. Third, many universities cross-listed some of their entrepreneurship courses in multiple schools or departments. This allowed students to enroll more easily and encouraged interdisciplinary collaboration.

Creating Additional Opportunities for Involvement in Entrepreneurial Activities

To expand the availability of entrepreneurship experiences and reach broad audiences of students, faculty, and community members, KCI universities sought additional avenues that provided alternatives to coursework. Most of the initiatives offered entrepreneurship opportunities in each of the following categories:

- ***Co-Curricular Activities.*** Universities offered an extensive variety of co-curricular activities to engage a wide range of students, including those who could not fit entrepreneurship courses into their schedules. Less intensive

exploratory opportunities, such as student clubs and speaker series, increase exposure to entrepreneurship and allow more informal exploration of it. More intensive, experiential learning activities—such as business plan competitions and internships—encourage further development of entrepreneurial skills.

- ***Faculty Development Opportunities.*** Universities offered professional development activities to encourage interest, develop skills, and support exploration of entrepreneurship among faculty. These opportunities included ongoing faculty seminars, on-site training workshops, and travel stipends to attend external conferences and workshops.
- ***Research Opportunities.*** The KCI universities promoted entrepreneurship research to help build a strong research base for entrepreneurship and draw in more faculty. Research opportunities included providing grants for faculty and students to conduct research and hosting conferences and speakers.
- ***Community Involvement.*** Community members and organizations provided support to the initiatives by raising funds, serving on boards, and working with students participating in specific program components. The KCI universities offered assistance to the community as well, by opening up some co-curricular activities to community members and providing training, educational workshops, and consulting services to local small and family businesses.

CAMPUS-WIDE AWARENESS, INTEREST, AND PARTICIPATION

Although the faculty survey revealed general awareness of the initiative among two-thirds of respondents, deeper familiarity with the initiative appeared to be low across the KCI campuses. Even among those faculty and students participating in entrepreneurship courses and activities, in-depth knowledge of the initiative was often lacking. Awareness varied among schools and was often highest at the business schools. However, administrators at some universities anticipated low levels of awareness in the early stages of the initiative, and some stakeholders reported that awareness had been increasing and would continue to grow.

Faculty were involved in the initiatives in various ways across the eight universities, including developing and teaching courses, leading program components, serving on entrepreneurship committees or boards, and advocating for entrepreneurship in their schools. Faculty interest and participation increased from the first year of implementation. Developing and teaching courses related to entrepreneurship probably was faculty members' most important role—the universities' 2005 KCI progress reports indicated that, on average, 24 faculty were teaching entrepreneurship courses at each university. However, the types of faculty—tenured, tenure-track, or adjuncts—teaching entrepreneurship courses differed across, and even within, universities. Some universities could not find enough tenured or tenure track faculty to teach entrepreneurship. At other universities, the tenured and tenure-track faculty were the main teachers of entrepreneurship courses. Faculty survey data and site visit focus group discussions suggest that three key factors have adversely affected the

level of faculty involvement and interest in entrepreneurship activities: (1) being too busy to devote time to entrepreneurship activities, (2) the belief held by many that entrepreneurship was not relevant to their field, and (3) lack of awareness about the initiative.

Student interest and participation increased with the expansion of entrepreneurship course offerings and activities. Across the six universities reporting data in their 2005 progress reports, undergraduate student enrollment in entrepreneurship courses increased an average of 32 percent from the 2003–2004 school year to the 2004–2005 school year, with much of the increase due to a rise in participation of non-business students. Students involved in entrepreneurship courses and activities expressed strong support for the initiatives overall. However, they also offered four reasons why other students might not participate: (1) time pressures of academic schedule and other commitments, (2) perceptions among some that entrepreneurship is just a concept for business students, (3) feeling intimidated by taking a class in a different department or school, and (4) barriers to enrolling in courses outside a student's home school.

Entrepreneurship staff at all universities expressed interest in raising campus awareness of entrepreneurship and interest in it. Strategies implemented to encourage greater interest and participation across campus included (1) expanding the definition of entrepreneurship to be more inclusive, (2) developing a base of supportive faculty to champion the initiative, and (3) increasing the availability of entrepreneurship courses and activities for students. Several universities also actively marketed their entrepreneurship initiatives, using informative websites, emails, newsletters, and word of mouth to promote their newly created centers and activities.

CONSIDERATIONS FOR PLANNING AND SUSTAINING A CAMPUS-WIDE ENTREPRENEURSHIP INITIATIVE

Other universities need to consider several important issues as they plan and implement their own such initiatives. Key considerations in the early stages of development of a campus-wide initiative are (1) establishing a clear identity for the initiative, and (2) successfully implementing the initiative's programs and activities. Universities also need to make plans for ensuring sustainability of the initiative.

Establishing an Identity on Campus

In creating a new identity, the KCI universities had to distinguish their new initiatives from other entities and programs on campus and communicate that the KCI's position was campus wide. In establishing an identity for their own new entrepreneurship initiatives, other universities need to consider several factors:

Defining Entrepreneurship. How entrepreneurship is defined can affect the breadth of its appeal to both students and faculty. The adoption of a broad and inclusive definition of entrepreneurship was integral to reaching many who had not previously realized that the subject was relevant to them or their fields. However, some stakeholders warned that too broad a definition could dilute the initiative.

Identifying Key Stakeholders and Partners. The key stakeholders and partners identified with the initiative can affect its development and signal its importance and place within the university. When the initiative involves a diverse set of stakeholders from across the university, it may be more likely to be perceived as campus-wide, and entrepreneurship programs are more likely to develop across a variety of schools. Many KCI universities involved a broad cross-section of administrators and faculty as initiative staff or as members of the initiative's boards, which appeared to foster a substantial and diverse development of curricula and programs for students across a range of schools.

Organizing the Initiative Within the University Structure. Three key considerations when deciding how to structure the initiative within a university are:

1. ***Whether to adopt a centralized or a decentralized structure.*** Centralized structures tended to create an environment more conducive to collaboration and open up opportunities for schools to engage in cross-disciplinary endeavors. In contrast, decentralized structures tended to be less conducive to collaboration but engendered a greater sense of ownership of the initiative at different schools.
2. ***Whether the business school should lead the initiative.*** Business schools can offer a wealth of knowledge and expertise in entrepreneurship. At initiatives led by business schools, however, university faculty and students were more likely to view entrepreneurship as a business concept.
3. ***Whether to locate the initiative within an existing center.*** The KCI universities that forged organizational affiliations between their initiatives and existing centers benefited from the institutional expertise and resources of these entities. When the existing centers are in the business school, however, this affiliation can hinder the perception of the initiative as campus wide.

Implementing the Initiative

Universities implementing new entrepreneurship initiatives must also decide how to develop programs and staff them appropriately. The KCI universities took different approaches in hiring staff to lead and operate their new initiatives, each with its own advantages and disadvantages. Implementation also necessitated strategies to increase the availability of courses and activities and to ensure faculty and student participation.

Staffing the Initiative. Implementation of entrepreneurship initiatives required staffing, and KCI universities took different approaches in hiring staff to head and operate their new initiatives. Universities needed to consider the backgrounds and experience of staff in making their staffing decisions. Two major staffing issues to consider are:

1. ***Whether to hire a director from within or outside the university.*** Directors hired from within knew how to maneuver the bureaucracy and had existing networks and contacts, but they were unable to devote themselves to the initiative full-time because of their preexisting responsibilities at the

university. In contrast, external directors were typically able to devote themselves full-time to the initiative, and they brought expertise in entrepreneurship to the position. However, they lacked the important connections within the university and surrounding community.

2. ***Whether to rely on tenured and tenure-track faculty or adjunct faculty.*** Many universities sought to engage tenured and tenure-track faculty who brought with them the academic experience and credibility useful for ensuring the sustainability of the initiative. The adjuncts, however, brought real-world knowledge and often were easier to recruit.

Engaging Faculty. Developing a base of supportive and involved university faculty is key to creating a sustainable campus-wide initiative, and KCI universities employed a variety of strategies to engage them. These strategies included providing grants to faculty for entrepreneurship curriculum development, encouraging academic research in entrepreneurship to enhance its credibility as an academic discipline, and offering training workshops and seminars to help spark faculty interest in entrepreneurship. Universities also worked to identify and appeal directly to faculty with potential interest in entrepreneurship activities, and some designated faculty “champions” to advocate for the initiative among their colleagues. Because these strategies were not always sufficient to overcome other barriers to faculty participation, some universities also hired new faculty interested in entrepreneurship.

Increasing Entrepreneurship Offerings and Accessibility of Programs for Students. Increasing the availability of entrepreneurship courses and activities for students is one of the most important components of expanding entrepreneurship education campus-wide. Engaging faculty to develop and teach the courses and lead activities is only one step toward this goal. As described earlier, many universities are using special course structures, so they can offer introductory courses in entrepreneurship while avoiding or postponing the burdensome course approval process, and are employing strategies to overcome barriers to enrollment in entrepreneurship courses. Universities also provided a wide range of co-curricular activities, which offered alternatives for students who could not take entrepreneurship courses. In addition, universities sought to address locational barriers by holding most activities on the main campus and sometimes establishing satellite offices in locations more convenient for some types of students.

SUSTAINING THE INITIATIVE

In addressing how to sustain the initiative, universities faced two major considerations: (1) identifying possible sources for continued funding, and (2) developing a base of support within the university community.

Fund-Raising Sources and Strategies. Potential sources of funding to sustain the entrepreneurship initiatives beyond the end of the KCI grant include the same ones that provided matching funds for the grant: the university; the surrounding community (including businesses, foundations, and individuals); alumni; and state governments. Specific strategies

to raise funds to sustain the initiatives varied with the structure and context of the initiative and its university. Universities with strong community ties relied on their local connections to provide financial support, and some public universities considered the state government a potential source of funding. In universities with decentralized initiatives, each participating school was expected to secure funds to sustain its own programs. Some initiatives had access to endowment funds from existing university centers, institutes, or programs. Many directors believed that raising an endowment was the best way to secure long-term funding for their initiatives.

Ensuring Continued Leadership Support for the Initiatives. Many of the initiatives relied heavily on the vision and energy of a few key leaders, and several stakeholders expressed concern about the fate of their initiatives if the director or other key leaders were to retire. Directors of several initiatives emphasized the importance of securing the support of several different university administrators and schools so that the initiative could endure the loss of any one person or any change in support from one school. Thus, while the KCI universities had different concerns based on their own experiences, all agreed that continued leadership was key to the survival of the initiative.

CHAPTER I

INTRODUCTION

Entrepreneurship is an important contributor to economic growth, and the entrepreneurial spirit has long been fundamental to American society. However, as an academic field, entrepreneurship is relatively new. First introduced as an area of study less than 60 years ago, entrepreneurship education has expanded rapidly since the 1980s (Cone 2005). By 2005, nearly 1,800 U.S. colleges and universities offered at least one entrepreneurship course (Cone 2005). Viewing universities as natural breeding grounds for entrepreneurship, the Ewing Marion Kauffman Foundation has encouraged the establishment of entrepreneurship programs and activities on campus. Besides promoting teaching and research in entrepreneurship, universities can also be involved in entrepreneurial endeavors through technology transfer, which has increased since the 1980 Bayh-Dole Act allowed universities to patent and license the results of federally funded research.

Still, entrepreneurship programs on college campuses are found most commonly in the business schools. For example, of the colleges and universities offering entrepreneurship courses in 2005, about 90 percent targeted them to business students (Cone 2005). A 2002 Cornell study of 38 universities with business school courses in entrepreneurship found that while roughly 60 percent allowed students from outside the business school to enroll in these courses, only 7 taught any such courses outside the business school (Streeter et al. 2002).

Since entrepreneurs and innovative ideas can arise from within any academic discipline, the Kauffman Foundation seeks to expand educational opportunities in entrepreneurship to all students, regardless of their field. To encourage university-wide entrepreneurship education, the Foundation launched the Kauffman Campuses Initiative (KCI) in 2003, in eight U.S. universities. The universities together received a total of \$25 million in five-year grants from the Foundation and committed to raising an additional \$75 million in support of their pledge to make entrepreneurship education available across their campuses and thus transform the way entrepreneurship is viewed, taught, and experienced. To examine how the KCI grants were used, the Kauffman Foundation contracted with Mathematica Policy Research, Inc. (MPR) to conduct an in-depth implementation study of the initiatives developed on the eight campuses.

An early product of the study, this report provides a cross-site analysis of the universities' implementation experiences during the beginning of their KCI grants. The rest of Chapter I describes the KCI universities and the design of the study. Chapter II discusses the management and structure of entrepreneurship initiatives, and Chapter III describes the entrepreneurship programs and activities offered. Chapter IV discusses grantees' approaches to improving campus awareness, attitudes, and participation. Finally, Chapter V presents considerations and strategies for implementing a campus-wide entrepreneurship initiative.

THE KCI UNIVERSITIES

In 2003, the Foundation invited 30 colleges and universities to develop a preliminary concept to compete for the first round of KCI grants. Fifteen were selected to continue in the competition, and each was awarded a \$50,000 planning grant to assist in the development of a comprehensive proposal to be presented to the Foundation later that year. In December 2003, the Foundation announced the eight recipients of full KCI grants: Florida International University, Howard University, the University of Illinois at Urbana-Champaign, the University of North Carolina at Chapel Hill, the University of Rochester, the University of Texas at El Paso, Wake Forest University, and Washington University in Saint Louis.

Table I.1 provides an overview of some key characteristics of the universities.¹ The grantees are a diverse group. Half are public, half are private, and the eight are widely dispersed geographically. Of the four public universities, two are the flagships of their state systems and attract many out-of-state students, while the other two are commuter campuses that serve primarily local residents, including many part-time students. One grantee is one of America's historically black colleges and universities (HBCUs), and the student bodies of two other grantees are predominantly Hispanic. Enrollment at the universities ranges from 6,500 to 42,000 undergraduate and graduate students. The number of schools and colleges within each university ranges from 6 to 19.²

With the KCI grants, universities planned to build upon their existing entrepreneurship programs. Before KCI, all eight universities had shown interest in entrepreneurship and were engaged in related activities. For example, all offered at least one entrepreneurship course in their business school, and most offered undergraduate concentrations and/or graduate degrees in entrepreneurship for business students. Other common pre-KCI activities included business plan competitions, internship programs, and student clubs. The majority of the universities had also established centers or institutes focused on entrepreneurship before the KCI, typically within their business schools. The Foundation

¹ Additional information on the grantee universities can be found in eight site-specific reports produced for this study.

² Throughout this report, the term *university* refers to the eight grantee institutions, while the term *school* refers to the schools, colleges, and other instructional units within the universities.

Table I.1. Grantee Characteristics

University	Region	Type	Number of Schools ^a	Number of Students ^b
Florida International University	Southeast	Public	19	37,000
Howard University	Mid-Atlantic	Private	12	11,000
University of Illinois at Urbana-Champaign	Midwest	Public	16	42,000
University of North Carolina at Chapel Hill	Southeast	Public	14	27,000
University of Rochester	Northeast	Private	6	8,500
University of Texas at El Paso	Southwest	Public	8	19,000
Wake Forest University	South	Private	7	6,500
Washington University in St. Louis	Midwest	Private	8	13,500

^aThese numbers do not include schools within other schools.

^bThese numbers include both undergraduate and graduate students.

was well aware of these programs and had awarded earlier grants—such as Kauffman Entrepreneur Internship Program (KEIP) grants—to most of them before inviting them to compete for the KCI.

Though the universities operated entrepreneurship programs before KCI, the activities were generally concentrated in the business schools. Even at universities that offered some courses or activities to students in other schools, the programs tended to be small and isolated from each other. The goal of KCI is to create campus-wide initiatives to ensure the availability of entrepreneurship education to students in all schools. The KCI grants helped universities transform their existing programs, expanding and linking entrepreneurship activities across their schools. In some instances, new centers created under the KCI took over preexisting programs from the business schools and made them available campus-wide. The universities also developed new entrepreneurship programs, including curriculum and other activities for students, faculty, and community.

STUDY DESIGN

The KCI gives the eight grantees flexibility in designing and implementing their approaches to providing students from all disciplines with opportunities to develop entrepreneurial ideas and skills. The implementation study that MPR is conducting is both examining how the KCI grants have been used to promote entrepreneurship on the campuses and documenting the initiatives that each grantee has developed. Learning more about successful, innovative practices in these initiatives will enable other universities considering campus-wide entrepreneurship initiatives to replicate these practices. In addition, the study will provide student and faculty feedback that can assist the KCI universities with refining their initiatives in the future.

Research Questions

The study addresses the following research questions:

1. What is the context for the university's KCI grant?
2. How has the university designed the structure and components of its entrepreneurship initiative?
3. How does the entrepreneurship initiative recruit administrators, faculty, and students?
4. What challenges has the university faced in developing and implementing its entrepreneurship initiative?
5. What are the successful innovative components and strategies of the implemented entrepreneurship initiative?

Data Sources

To address the questions, the study includes two rounds of extended site visits and surveys of faculty and students at the grantee universities. This report relies on data collected during the first round of site visit activities and the baseline faculty survey.³ Additional information came from the 2005 KCI progress reports grantees submitted to the Kauffman Foundation, as well as from initiative-related materials on university websites.

The first round of site visits to the eight universities was conducted mainly in fall 2005, when universities were in their second year of KCI planning and implementation.⁴ Through these visits, MPR researchers obtained an in-depth, qualitative view of how each university conceived the initiative and has developed it during the two years since it was funded. The visits included two main data collection activities:

- **Stakeholder Interviews.** At each university, site visitors conducted interviews with key stakeholders who, collectively, provided information on nearly every aspect of the entrepreneurship initiative. These stakeholders typically included the initiative director and key staff of the entrepreneurship initiatives; university leaders, deans, and senior faculty; and representatives of the surrounding communities. We defined the types of stakeholders and the topics to cover, and our contacts at each university recommended specific people to interview. Between 7 and 17 stakeholder interviews were conducted at each university. They ranged from 30 minutes to 2 hours, depending on the depth of the stakeholder's involvement in the initiative.

³ The first round of student surveys will be conducted in the 2006–2007 school year, and thus those data were not available for use in this report.

⁴ Six of the eight site visits took place in fall 2005. MPR conducted a pilot site visit to one of the Kauffman campuses in April 2005. The final visit in the first round was completed in January 2006.

- **Focus Groups.** Site visitors met with small groups of faculty who teach courses on entrepreneurship or are otherwise involved with the university's entrepreneurship initiative and, separately, with students who had participated in an entrepreneurship course or activity. Our contacts at each university provided lists of involved faculty and students to invite to the focus group sessions. The faculty focus groups provided faculty views of several issues, including their reasons for participating in the initiative, the challenges they have faced so far, and their suggestions for ways to improve the initiative. The student focus groups provided feedback on why students participate in the initiative, aspects of the initiative they find most interesting and useful, and suggestions they have to attract more students or otherwise improve the initiative. Each visit typically included two or three faculty focus groups and two or three student focus groups. Focus groups included an average of six participants and lasted between 60 and 150 minutes, depending on the number and type of participants.

In addition to interviews and focus groups, each site visit included a tour of the facilities used for the entrepreneurship programs. Some visits also included observations of advisory board meetings, entrepreneurship classes, or other activities. Generally, three or four MPR researchers spent about three days on each campus. Appendix A contains additional information on the site visit methodology. We will conduct a second round of similarly structured visits in spring 2009, to understand how the initiatives have progressed.

After each of the eight site visits, MPR researchers produced a site-specific report on the grantee university's entrepreneurial initiative. These reports describe in detail the implementation efforts of the university to date and reflect on early implementation approaches and challenges.⁵ Each site-specific report has been given to the university, both to obtain verification and to share MPR's analysis of the implementation of the campus's entrepreneurship initiative.

In addition to site visits, data from a survey of faculty provided another perspective on some issues covered in this report—particularly those relating to awareness, involvement, and attitudes toward entrepreneurship of faculty in general. MPR conducted the first faculty survey at seven of the grantee universities in spring 2006. The survey included a broad cross-section of respondents, including many who were not involved in the entrepreneurship initiatives and thus were not represented in the focus groups conducted during the site visits. We obtained lists of all tenured and tenure-track faculty at the KCI universities and sampled 100 from each. Response rates ranged from 48 percent to 55 percent at each university, with an overall rate of 53 percent. Additional information on the survey methodology can be found in Appendix B and in a forthcoming memorandum to the Foundation. A second faculty survey, to be conducted in spring 2009, will examine similar issues at a later phase in the initiative.

⁵ After the second round of site visits, a similar set of site-specific reports will provide an update on the implementation status of each university's initiative and the progress that grantees have made in developing sustainable programs.

CHAPTER II

MANAGEMENT AND STRUCTURE OF ENTREPRENEURSHIP INITIATIVES

The ways universities structure and manage their initiatives can have important implications for the development of entrepreneurship programs across campus. This chapter discusses how universities were integrating the new initiatives into their existing operations during the early years of the KCI grants, how various university and community members were involved in overseeing and guiding them, and what resources were devoted to them.

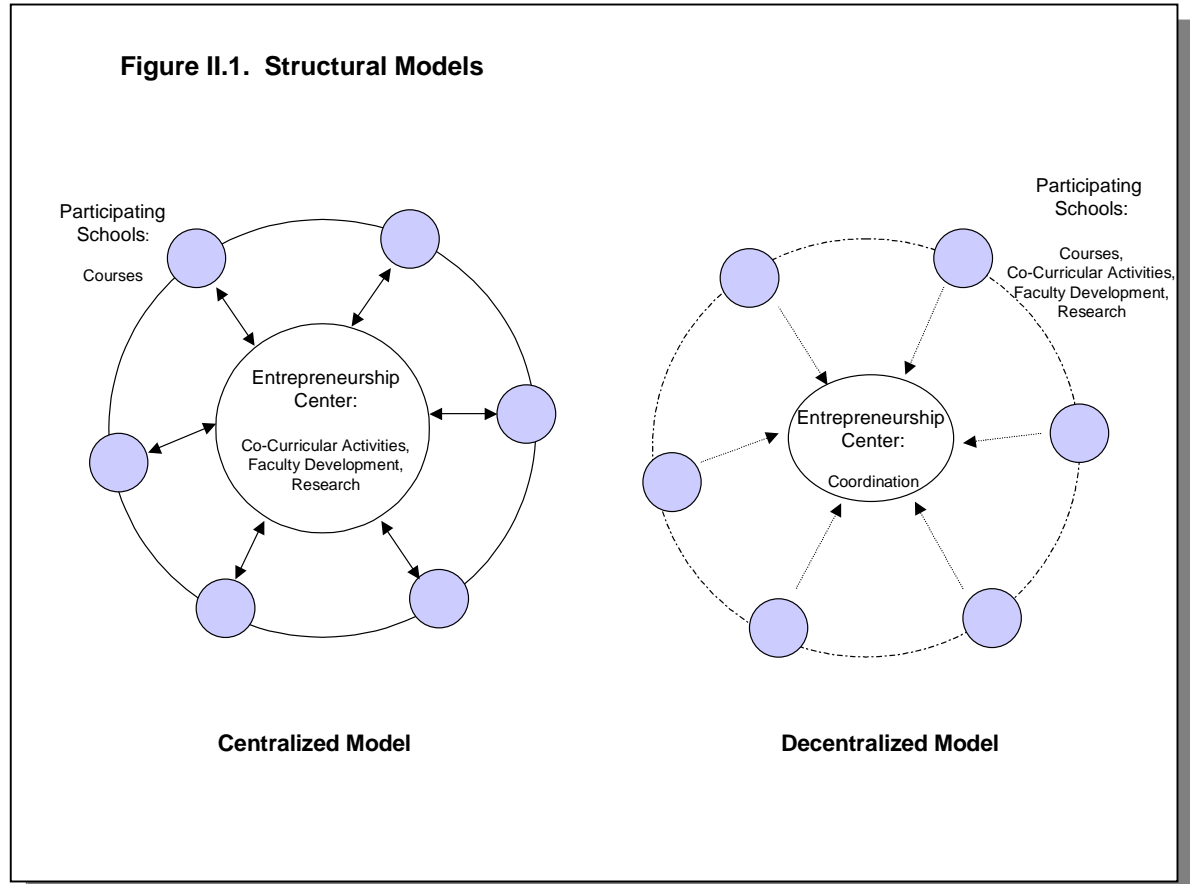
INTEGRATING ENTREPRENEURSHIP INITIATIVES WITHIN UNIVERSITIES

The eight universities designed their initiatives to be responsive to the KCI goal of creating campus-wide entrepreneurship programs. Thus, all the universities involved a number of different schools and other university units in their initiative, though in different ways. Each grantee either created a new center, institute, or academy dedicated to entrepreneurship with their KCI grants or located their initiatives within a preexisting center or institute structure. Most of these entities were officially independent of any single school. However, a few were officially within the business school, and some others have strong ties to the business school despite their official independence. In this section we discuss the structure of the new entrepreneurship initiatives and their involvement with different schools and other entities on campus.

Organizational Structure of Entrepreneurship Programs

In writing their KCI grant proposal, each university had to consider how best to fit a campus-wide entrepreneurship initiative within their campus, taking into account the existing entrepreneurial programs as well as the size, organizational structure, and culture of the university. Some designed decentralized initiatives, in which different schools created their own entrepreneurship activities independently, while others created centralized organizational structures. Figure II.1 shows these two models.

Decentralized Model. KCI universities with decentralized initiatives offered different entrepreneurship opportunities to students in different schools. Decisions were made at the



school level, with each participating school developing its own courses and other activities. Each wrote its own section of the grant proposal, had its own initiative staff, and managed its portion of the KCI budget. Since most activities were targeted to members of a specific school—even if others were allowed to participate—the decentralized model resulted in little interaction between students and faculty from different disciplines.

Two of the eight universities developed initiatives with decentralized organizational structures. Stakeholders at both these universities cited the highly independent nature of the universities' separate schools as a motivation for their choice of a decentralized design.

Centralized Model. The most common type of organizational structure—adopted by six of the eight KCI universities—was the centralized model. In this model, most activities were designed to serve a broad range of students, rather than only the students from a particular school, which encouraged interdisciplinary interaction. Most decisions were made centrally, by the initiative leaders and advisory boards (discussed later in this chapter), rather than independently by individual schools. Centralized initiatives tried to involve administrators and faculty from a variety of schools, both in leadership roles and as program participants. Initiative staff were typically located together in a single office suite under the centralized model, and the initiative's entire budget was managed by the director rather than allocated to different schools. Although centralized initiatives were often subdivided into

different program areas, these were interdisciplinary areas—such as curriculum or research—rather than the school-specific subdivisions found in decentralized initiatives.

In practice, all eight campus-wide entrepreneurship initiatives had some elements of both the centralized and the decentralized models. For example, curriculum was decentralized to some extent in all eight universities, since their academic structures typically require each course to be officially listed within one or more schools, and each school has its own curriculum committee and approval process for new academic courses. Even initiatives with decentralized structures had to designate a director for the KCI grant who provided some oversight of all activities it funded. At one decentralized initiative, representatives of each participating school met together monthly to discuss the activities at the various schools and strategies for promoting the initiative; another operated a business plan competition and internship program open to students from across the campus.

The degree of centralization adopted can have implications for how different schools interact and for how entrepreneurship is perceived by students and faculty across the campus. For example, centralized structures tended to encourage greater cross-disciplinary collaboration. Participants in initiatives with decentralized structures cited as a challenge the lack of awareness of and connections between the entrepreneurship activities available at different schools across the campus. However, the schools in decentralized initiatives felt more ownership of their entrepreneurship programs. Decentralized initiatives were not perceived as being part of the business school, as some centralized initiatives were.

Involvement of Different Schools Across Campus

All the initiatives involved a wide range of schools across the eight universities. However, not *every* school within the university was necessarily involved, nor did schools participate to the same degree. Although many entrepreneurship activities were open to all, each initiative focused its programs on a subset of the university's schools. While most universities targeted the majority of their new activities to schools with undergraduates, one focused on its graduate schools.

Table II.1 shows the involvement of various schools in entrepreneurship activities at the KCI universities. All eight included the college of arts and sciences in their initiatives. This school is typically the largest academic unit and is considered the core of the university. At many universities, all undergraduates begin their studies in this school. These factors made the inclusion of the college of arts and sciences a key step in establishing a campus-wide initiative.

Business schools were involved in the entrepreneurship initiatives at all eight universities. This discipline is most often associated with the field of entrepreneurship, and all these schools offered at least some entrepreneurship activities before KCI. Because of this experience, business schools took the lead in the cross-campus entrepreneurship

Table II.1. Schools Involved

School ^a	Number of Universities at Which School Is Involved in Entrepreneurship	Number of Universities at Which School Exists ^b
Arts and Sciences	8	8
Business	8	8
Engineering	5	5
Education	3	6
Fine Arts, Art, or Music	3	4
Medicine, Nursing, or Dentistry	3	6
Communications	2	4
Law	2	6
Agriculture	1	1
Hospitality and Tourism	1	1
Social Work	1	5

Source: Site visit interviews.

^aThe numbers in this table do not include schools within other schools. For example, one university's School of Engineering and Applied Sciences is part of its College of Arts and Sciences and thus is not counted separately in this table.

^bSome universities have more than one school in a given category. For example, one university has two business schools—one for undergraduates and one for graduate students. However, even in such cases, no university is counted more than once in any cell of the table.

initiatives at several of the universities.¹ At others, however, business schools deliberately took a back seat to other schools, to encourage the perception that entrepreneurship is broadly applicable to other disciplines.

Most KCI universities went beyond business and arts and sciences, however, to involve other schools in their entrepreneurship initiatives. The third most commonly involved discipline was engineering. Engineering schools participated in the entrepreneurship initiatives at all five of the KCI universities that have an engineering school. To many, engineering seems a natural fit with entrepreneurship, since engineering schools have traditionally played a major role in research that leads to technology transfer and start-up businesses. Schools of education, fine arts, and health professions were also involved in entrepreneurship, at three KCI campuses each. Schools of communications and law each

¹ For example, two initiatives were officially part of the business school, the offices of two others were physically located in business school buildings, and the directors of two others had faculty appointments in the business school.

participated in two initiatives. In addition, individual grantee universities infused entrepreneurship into other disciplines, including agriculture, hospitality, and social work.

Collaborations with Other Centers or Offices Within the University

In developing their KCI structures and activities, some universities forged collaborations between their new initiatives and preexisting units within the university, such as entrepreneurship centers and technology transfer offices. Some universities located their new entrepreneurship initiatives within existing structures on campus, to take advantage of their institutional expertise and to facilitate sharing of space and staff resources. Several of the universities had established centers or institutes focused on entrepreneurship (typically affiliated with the business school) before the KCI. One university located its new initiative within its existing entrepreneurship center, and the initiative shares the center's director. Other universities decided to position their new cross-campus initiatives outside the centers, although one of these located its initiative within a larger institute that houses the preexisting center. The director of that institute—devoted to promoting private enterprise—also directed the new initiative at the university. His connections within the university and the community were useful, and he was able to direct institute staff and resources to assist the entrepreneurship initiative, but his split responsibilities left him less time to devote to leading the KCI than most directors had.

Technology transfer is an important part of entrepreneurship at universities. Most have offices devoted to promoting the transfer of university technology by encouraging innovation and licensing new ideas and ventures. Since the passage of the Bayh-Dole Act in 1980, which allows universities to patent and license the results of federally funded research, technology transfer has become a profitable avenue for many universities. Although it was not closely tied to KCI at most universities, some initiatives began collaborating with their offices of technology transfer early in the KCI grant period. For example, one initiative hosted an event focusing on the supports provided by the university's Office of Technology Transfer to those interested in converting new ideas into ventures. Another initiative joined with a preexisting technology entrepreneurship center to sponsor a business plan competition, whose winners receive free space in a small business incubator located in the university research park near the KCI offices. Stakeholders at other KCI universities expressed interest in developing such collaborations.

OVERSIGHT AND GUIDANCE

A broad base of support from the university leadership and surrounding community can facilitate the success of new campus initiatives. Although the level of administrative support and type of involvement varied, the entrepreneurship initiative at each KCI university was guided by university leaders and advisory board members who provided a rich range of perspectives, expertise, and assistance.

Role of University Leadership

The commitment and involvement of senior university leaders, such as the president, chancellor, and provost, can have an important impact on the development, growth, and sustainability of any campus-wide initiative. These leaders can catalyze support among others across campus for programs that are high priorities for them. In addition, university presidents can channel existing university funds and play an important role in raising new funds.

While the leaders of all eight grantee universities officially supported the KCI, some were more involved in the initiatives or had more personal interest in entrepreneurship than others. For example, one university's chancellor served on the initiative's steering committee, participated in its quarterly meetings, and was credited by stakeholders on campus as being an enthusiastic champion of the program. Most of the university presidents and chancellors traveled to Kansas City to participate in the grant proposal presentation to the Kauffman Foundation, although there was some turnover among university leaders after the KCI awards.

Some initiative directors reported directly to the president, chancellor, or provost, while others reported to individual deans or boards of deans. Although university-wide leaders may have had less time than deans to devote to the KCI, their position enabled them to bring a diverse set of stakeholders together. Their broad perspective may also have been more beneficial for oversight of a campus-wide initiative than that of deans, who are focused on their individual schools. Deans may also come into conflict with each other, particularly on campuses where interdisciplinary interactions are uncommon, and the involvement of a university leader can be necessary to encourage collaboration and resolve conflicts. The reporting structure can also affect how the initiative is viewed by faculty. Initiatives overseen by the dean of a single school may be perceived to be less relevant to other disciplines, which could discourage faculty and students from other schools from becoming involved.

Using Advisory Boards

Every initiative had an advisory board to guide and support its entrepreneurship programs, and several had more than one. Some universities had separate boards for different program areas or schools. Five initiatives had both a university faculty/administrator board and a community board, which served different purposes.

Advisory boards composed of university administrators and faculty provided advice to each of the eight grantees. These boards typically included at least one representative from each of the schools involved in the initiative. In five cases, board members were deans or representatives selected by their deans, while in others, membership was based largely on personal interest or involvement in entrepreneurship activities; the board of one initiative had both types of members. A few initiatives had two different university boards—one of upper-level administrators and another of those faculty and staff most actively involved in developing and implementing program components. A major function of these interdisciplinary boards was to encourage cross-campus support. Board members acted as

ambassadors to their home schools, championing the initiative to their colleagues and students and passing along information about entrepreneurship programs and activities.

In addition to boards of university members, five grantees had separate boards composed of representatives from the broader community around the university. These people were typically community leaders, entrepreneurs, and social entrepreneurs recruited by the initiative director. The board of at least one initiative also included alumni. At one decentralized initiative, some of the participating schools had their own community boards, composed of members in the relevant fields. One role of community advisory boards was to help secure funding for the initiatives. At one university, specific financial contributions were required of all board members. Community board members were often also involved in entrepreneurship initiatives in other ways, such as judging business plan competitions, giving guest lectures, and serving as mentors for students.

RESOURCES

No initiative can survive without resources. The development and implementation of the KCI depended in large part on the efforts of dedicated staff to plan, organize, and lead the entrepreneurship programs and activities at each university. Adequate funding was required to support these staff and their activities. The KCI grants provided between \$2 and \$4.5 million to each of the eight grantees, but additional resources were needed to meet matching requirements (described below) and to sustain the initiatives, from the early years through the end of the grant period and beyond.

Staffing Entrepreneurship Programs

Several different types of staff were needed to implement and support the campus-wide initiatives. Table II.2 summarizes the types of staff used by the eight KCI universities.

Director. Each initiative was led by a director who was ultimately responsible for all activities under the KCI grant. The responsibilities of directors of initiatives with centralized organizational structures differed somewhat from those of decentralized initiatives. In

Table II.2. Types of Initiative Staff

Type of Staff	Number of Initiatives with This Type of Staff	Number of This Type of Staff at Each University (Range)
Director		
Recruited from outside the university	5	1
Recruited from within the university	3	1
Faculty Component Leaders	6	1 to 15
Non-Faculty Staff	8	1 to 7

Source: Site visit interviews.

centralized structures, the director's roles included designing programs and activities, working with administrators and faculty in different schools to develop and implement them, managing staff, overseeing budgets, recruiting advisory board members, raising funds, and serving as the "face" of the initiative on campus. In decentralized initiatives, however, much of the decision-making authority rested with the participating schools, so the director's role was different, involving more coordination and serving as a resource to the different schools. At five universities—including both decentralized initiatives and three centralized initiatives—KCI directors also taught entrepreneurship courses.

Five of the KCI grantees recruited their director from outside the university, while the other three drew on existing university faculty members—often those responsible for leading the design and grant proposal effort—to head the new initiative.² Established faculty may have useful connections within the university and the community but less time to devote to directing a new initiative. For example, one director drawn from within a KCI university was able to devote less than a third of his time to the initiative, and another filled the director role in addition to his responsibilities as dean of a school. In contrast, all the directors recruited from outside the university were able to focus on entrepreneurship full-time. However, those recruited externally needed to acclimate themselves to the university's culture and had to forge new relationships within the university and the surrounding community.

Of those directors recruited from outside, most came from other universities with established entrepreneurship programs. Directors without academic credentials and experience sometimes found it more difficult to adapt to the university environment and to attract the support of faculty. Of the three directors recruited from within, two were affiliated with the business school. The affiliation of the director with a specific school within the university may have had an effect on the acceptance of the initiative across disciplines.

Faculty Component Leaders. Below the director, most universities had senior faculty or school administrators who served as leaders of specific program components within the initiative. In decentralized initiatives, a component leader may have overseen all activities at a specific school; in centralized initiatives, however, the components were typically cross-disciplinary areas such as curriculum, research, or faculty seminars. While some of the component leader faculty also taught entrepreneurship courses, their roles as initiative staff went further, and most had official titles within the initiative—typically director of their component area, program, center, or institute. Their responsibilities included developing specific programs and activities within their area, promoting the interdisciplinary nature of the initiatives by serving as champions within their home schools, and sometimes raising funds for their programs.

² Two of the five universities that recruited their director from outside actually did so about a year before receiving the KCI grant, but with the intent of establishing an entrepreneurship center. These directors helped shape the KCI grant proposals at their universities.

Component leaders were typically drawn from a variety of disciplines. They were senior faculty, associate deans, or deans who take on responsibilities within the entrepreneurship initiative in addition to their preexisting full-time appointment at a specific school. In some cases, schools considered the time these faculty spent as part of their matching contribution to the initiative, while in others the KCI grant paid part of their salary; for example, one university provided a \$5,000 stipend to each component leader. Although component leaders sometimes received some release time or reduction in their teaching load with their new role, their other responsibilities often left them limited time to devote to the initiative.

Non-Faculty Staff. KCI initiatives also needed full- or part-time non-faculty staff to provide support to the director and component leaders. Every KCI initiative relied on at least one support staff member, and some had as many as seven. These non-faculty initiative staff performed administrative tasks at various levels, from administrative assistant to associate director. Although these staff were not regular faculty, at three universities their responsibilities sometimes included teaching introductory entrepreneurship courses. A few initiatives placed a key non-faculty staff member in the role of component leader, and one of these filled all its component leader positions this way.

Support staff could work for the initiative full-time or part-time, and some had other responsibilities at the university. Four of the KCI initiatives had full-time support staff, two had part-time support staff, and two had a mixture of full- and part-time staff. Part-time staff were typically shared with other offices within the university. This arrangement could be both an efficient use of resources and a useful way to create cross-campus linkages. For example, a KCI staff member at one university split her time between the campus-wide initiative and a center focused on technology entrepreneurship within the engineering school. Initiatives located within an existing institute or center may have been particularly well positioned to benefit from shared staffing resources.

Funding Entrepreneurship Initiatives

Through KCI, the Foundation provided the eight universities a total of \$25 million over five years to support their entrepreneurship initiatives.³ The universities pledged to raise additional funds to match their grant amounts three to one. In addition to supporting the development of the initiatives during the KCI grant period, these additional funds will be needed to sustain the initiatives after the grants end.

Responsibility for fund-raising was shared between the initiative staff and senior university administrators. University presidents or chancellors are typically involved in approaching potential donors to request large amounts. They can also channel institutional

³ All eight universities have also received additional, separate funding from the Foundation to support specific activities related to entrepreneurship, including grants to support internship programs, to conduct research, and to host conferences. As mentioned in Chapter I, most KCI universities had received some type of grants from the Foundation before KCI; the majority also received other grants later. However, receipt of these different grants was not linked to receipt of the KCI funding.

funds to the entrepreneurship initiatives. University development offices were often involved and, at one university, bore primary responsibility for raising funds for the entrepreneurship initiative. Deans of some schools also played an important role, particularly in decentralized initiatives, where more fund-raising responsibility rested with each participating school to sustain its own programs. However, at about half the KCI universities, the initiative director bore primary responsibility for identifying and pursuing potential sources of support.

Many directors believed that raising an endowment was the best strategy for securing long-term funding for their initiatives. Endowments can provide a stable, continuous source of dedicated funding. However, by the time of MPR's first round of site visits, only two of the KCI universities had received new endowment funds to sustain their entrepreneurship initiatives.⁴ All the universities relied on other types of ongoing funding to support their current and future activities.

Sources of funding, both current and potential, included the university, the alumni, and the community. The eight KCI universities provided considerable support to their entrepreneurship initiatives, including in-kind contributions. For example, universities often provided space for initiative offices and paid at least part of the salaries of some staff. In fact, university contributions were the single largest source of matching funds. At least one of the initiatives at public universities had also received some funding from the state. Another common source of funding was the surrounding community, including businesses, foundations, and individuals. Only one initiative received no external funding in the early stage of KCI, and it planned to pursue such donations in the future. Most funding from the community came in the form of donations, but a few initiatives collected fees from community members for participation in some programs. Universities with a community advisory board often looked to board members for financial contributions and/or assistance in raising funds from others. A few initiatives received some financial support from alumni, and several others planned to target alumni and parents in future fund-raising efforts.

⁴ A few other universities have existing endowment funds (pre-dating KCI) that support centers or chairs related to entrepreneurship.

CHAPTER III

ENTREPRENEURSHIP PROGRAMS AND ACTIVITIES OFFERED

In response to the KCI grants, the universities developed new entrepreneurship programs and expanded existing ones to create a broad range of entrepreneurship education opportunities for the university community. These activities fall into four broad categories: (1) entrepreneurship curriculum, (2) non-curricular activities that support and develop entrepreneurial interests, (3) research opportunities, and (4) community outreach.

INFUSING ENTREPRENEURSHIP INTO THE CURRICULUM

An important step in spreading entrepreneurial education campus-wide was to infuse it into the curriculum. In keeping with the goals of the KCI grant to create campus-wide initiatives, most of the universities emphasized expanding the availability of entrepreneurship curriculum to engage students outside the business school. Thus, new courses in entrepreneurship were developed and existing courses were revised in non-business schools, primarily by non-business faculty. Similarly, courses at business schools were created, revised, and opened to non-business students. Several universities also created entrepreneurship degree or certificate programs for a broad range of students.

Expanding the Availability of Entrepreneurship Courses Campus-Wide

To attract a broad base of students, KCI universities created new courses in entrepreneurship and revised existing courses across the campus to focus on it. Faculty from various schools across the eight universities developed about 60 new entrepreneurship courses in a wide array of disciplines, including history, biology, and communications (Table III.1). Another 30 existing courses were revised, including both revisions to existing entrepreneurship courses and modifications to courses in other disciplines to incorporate entrepreneurial themes. About three-fourths of the new and revised courses target undergraduates; the rest are graduate courses.

Table III.1. Strategies for Expanding the Availability of Entrepreneurship Courses

Strategy	Number of Universities	Number of Courses ^a		
		Under-graduate	Graduate	Total
Creating New Entrepreneurship Courses	8	46	15	61
Offering freshman seminars in entrepreneurship	3	18	0	18
Modifying Existing Courses to Focus on Entrepreneurship	6	21	9	30
Providing Course Development Grants to Faculty ^b	6	NA	NA	39

Source: 2005 KCI progress reports and site visit interviews.

^aThese figures are estimates based on information from the 2005 KCI progress reports and the site visit interviews. Some of the universities have since developed new entrepreneurship courses.

^bCourse development grants were available both to create new courses or to modify existing courses.

NA = not available.

Types of Entrepreneurship Courses

Although all these new and revised courses incorporated entrepreneurial themes, they differed in content and purpose. The majority (roughly 70 percent) were designed for non-business students and housed at schools with no traditional ties to business, such as colleges of arts and sciences, engineering, or education. Some courses presented entrepreneurship curriculum relevant to a specific discipline or field, while others blended several fields to broaden the notion of entrepreneurship and demonstrate its interdisciplinary nature. Entrepreneurship courses at business schools, while open to students from other schools, usually focused on business concepts and theory, such as business plan development, finance, management, and marketing. Entrepreneurship courses typically address one of two purposes:

1. ***Developing Entrepreneurial Skills.*** Almost two-thirds of the new and revised courses focused on teaching students entrepreneurial skills and how to apply them. For example, the “Social Entrepreneurship” course cross-listed in one university’s schools of business and social work focused on teaching students to apply entrepreneurial skills to create innovative solutions for leading and funding efforts to address social needs. Many of these courses also included experiential learning components, teaching students how to directly apply the skills they learned. For example, students enrolled in certain entrepreneurship courses at one university were required to participate in a program that assigned students to assist community partners with projects

related to entrepreneurship. A few courses at other universities were designed to help students develop business plans for specific ventures proposed by the students.

2. ***Teaching About Entrepreneurship.*** Other courses focused broadly on the role of entrepreneurship and entrepreneurs in the economy and society. For example, one university's undergraduate course titled "The History of Black Business in America" studied entrepreneurship in a historical context, and another university's "Understanding Entrepreneurship: A Sociological Perspective" examined the growth of work in a capitalist economy and focused upon different explanations for entrepreneurship. In general, these theoretically broad-based courses were housed in non-business schools and made up a little over a third of the new and revised courses.

Challenges and Strategies for Expanding the Availability of Courses

In expanding the entrepreneurship curriculum to reach a broader range of students, universities faced three major challenges. The first entailed attracting faculty with the interest and knowledge to develop and teach entrepreneurship courses despite busy schedules and the constraints of departmental teaching requirements. Second, the integration of new courses into the curriculum is often hampered by the university's approval process, particularly at public institutions, where a lengthy series of reviews culminates at the state level. Private universities are subject to fewer requirements, so the process is often easier, but new courses are still subject to multiple reviews. Third, student access to entrepreneurship courses can be hampered by procedural barriers. All eight universities officially allow students to take courses outside their home school, but the enrollment process can be difficult, with various stipulations—such as special approvals—that can discourage students. The requirements of some majors limit the electives students can take outside their home school. Even when no official barriers exist, advisors might discourage students from enrolling in courses in other schools. In response, the KCI universities implemented several strategies: (1) providing support for course development, (2) utilizing special types of course structures with simpler approval processes, and (3) cross-listing courses in multiple schools.

Providing Support for Course Development. The most common strategy for encouraging the development of entrepreneurship courses was to offer curriculum development grants or stipends. Six initiatives offered small stipends or grants to faculty to assist them in developing new courses in entrepreneurship or in enhancing or revising existing courses to focus on entrepreneurship. For the most part, proposals for course development or enhancement were solicited from faculty university-wide, and amounts ranged from \$3,000 to \$15,000. The 2005 KCI progress reports suggest that just under half the new and revised entrepreneurship courses developed across the eight universities were supported by curriculum development grants. In addition to the grants to faculty, one initiative also offered compensation to university departments for the time their faculty spent teaching entrepreneurship courses. Another initiative required that faculty commit to

teaching a course for four consecutive years in order to receive course development grant funds.

Using Course Structures with Streamlined Approval Procedures. One way some initiatives have addressed the challenges related to the course approval process is by offering entrepreneurship courses within a special “freshman seminar” course structure. Freshman seminars on various topics were offered at several universities before KCI, and had their own approval processes, in which decisions were typically made by a single committee. These courses are typically small (20 to 25 students) and highly interactive, and emphasize small-group discussions. Three universities used the seminar structure to introduce freshman courses in entrepreneurship. Of the approximately 50 freshman seminar courses taught at each of these universities, between 3 and 6 focused on entrepreneurship. These courses were developed by faculty from various departments.

Universities have found creating freshman seminars in entrepreneurship attractive for reasons besides the streamlined approval process. The seminars can reach a diverse audience, introduce students to entrepreneurial thinking early in their college careers, and thus serve as a good entry point for further participation in entrepreneurship activities. At two of the universities, students are required to take at least one freshman seminar (though not necessarily in entrepreneurship), so this is a way for entrepreneurship to fill a course requirement. Further, seminar courses are not bound to a specific department, so faculty enjoy flexibility in developing the content, and freshmen, regardless of their eventual major, face no obstacles to enrollment.

As another method of easing the introduction of new entrepreneurship courses, several initiatives initially offered them under existing “special topics” course numbers, which were available in many departments to allow faculty to introduce courses on new topics—such as entrepreneurship—without first completing the full approval process. However, a new course can typically be offered this way for only one year, or while the formal approval process is under way.

Easing Access to Entrepreneurship Courses Across Schools. To attract a diverse group of students, grantees employed strategies for easing access to entrepreneurship courses for students from different schools and departments. More than half the universities cross-listed some of their entrepreneurship courses in multiple schools or departments. Cross-listing courses allows students from different schools to enroll more easily, in addition to encouraging interdisciplinary collaboration. Regardless of cross-listing, one university exempted entrepreneurship courses from the usual tuition transfer process between schools within the university when students from one school take courses at another.

Creating Entrepreneurship Programs of Study for Non-Business Students

Before KCI, six universities offered concentrations in entrepreneurship for business students. However, only one offered a preexisting minor in entrepreneurship to students outside the business school. In an effort to establish a firm foothold for entrepreneurship

education and provide a path for non-business students with serious interest in pursuing entrepreneurship, six universities used the KCI grant to create or revise entrepreneurship programs of study for non-business students. These included a major, minors, and certificate programs (Table III.2).

Table III.2. Programs of Study for Non-Business Students

Type of Program	Number of Universities	School		
		Arts and Sciences	Business	Music
Majors (undergraduate)	1	0	1	0
Minors (undergraduate)	4	2	2 ^a	0
Certificate Programs				
Undergraduate	2	0	1	1 ^b
Graduate	1	0	1	0

Source: Site visit interviews.

^aWhile one of the two minors in the business school was new, the other was a revision of an existing program.

^bAn entrepreneurship cluster was offered as a part of a broader certificate program.

Major. One university developed a 24-credit-hour undergraduate major in entrepreneurship. This major, offered through the business school, was available to both business and non-business students, although the course requirements differed slightly. Non-business students had four required courses and two electives, slightly fewer than business students had to take to fulfill the major requirements.

Minors. Two universities created new entrepreneurship minors and offered them through their undergraduate colleges of arts and sciences. The minors were structured similarly at both universities—each consisted of three or four required courses and one elective, chosen from a wide selection offered across the university. Most of the required courses were taught by faculty from various departments in the college of arts and sciences, and courses in social entrepreneurship were included to attract a broad range of students. One university offered a separate track within its minor for students interested in social rather than commercial ventures, and the other called its minor “Entrepreneurship and Social Enterprise” and included social entrepreneurship courses and elements throughout. Both minors included a mandatory experiential learning component—one required students to participate in an internship abroad, while the other offered the option of an internship or an independent study project.

At two other universities, business schools offered undergraduate minors for non-business students. Although these minors were housed at the business school, they assumed the role of teaching students how to be entrepreneurial in any context. One minor predated

the KCI grant but was revised to include additional courses targeted to students who did not have a background in business; the revised minor included two required courses and three electives chosen from entrepreneurship courses offered across the campus. The new minor at the other university included three required courses and one elective, all taught in the business school.

Certificate Programs. Two universities offered entrepreneurship certificate programs. One university developed two new entrepreneurship certificate programs within the business school. One is for undergraduates and the other for graduate students, but both target non-business students. Another university—one with a decentralized initiative—offered an entrepreneurship cluster within a larger certificate program at its music school.

Establishing these programs of study presented several challenges. First, common to all universities and programs was the need to create enough entrepreneurship courses to meet the required and elective numbers. In addition, establishing which courses to include and designing the program required the efforts and collaboration of a range of people, including faculty, deans, and initiative staff. Once designed, academic programs of study must pass a series of reviews at different levels of the university. For example, the adoption of the minor at one university required the approval of an academic planning committee, an undergraduate college curriculum committee, and a full faculty committee. Programs of study housed at business schools may experience greater support in the development and approval process because of the school's traditional ties to entrepreneurship and the presence of more existing courses to build upon. In contrast, the minors introduced at colleges of arts and sciences had little foundation on which to build. Furthermore, entrepreneurship is perceived by some as incompatible with a liberal arts education, which sometimes makes it difficult to garner broad support from faculty and administrators for programs of study outside the business school.

PROVIDING ACTIVITIES TO SUPPORT AND DEVELOP ENTREPRENEURIAL INTERESTS

Besides developing curriculum, universities sought other means of expanding the availability of entrepreneurship experiences campus-wide. These additional avenues, which offered an alternative to coursework and provided a variety of ways to engage students and faculty and encourage their entrepreneurial interests, fell into two broad categories: (1) co-curricular activities, and (2) faculty development opportunities.

Co-Curricular Activities

Co-curricular activities can serve as alternatives, supplements, or enhancements to entrepreneurship coursework and also allow more flexibility to include types of activities that may not fit into courses, including both more- and less-intensive experiences. The wider range of activities may engage a broader range of students, including those who are unable to fit entrepreneurship courses into their schedules, and some are open to faculty and community members as well. There are two general types of co-curricular activities: (1) less-intensive exploratory learning opportunities that increase exposure to and allow casual exploration of entrepreneurship, and (2) more-intensive experiential learning activities that

encourage further development of entrepreneurship skills. Table III.3 shows the number of universities offering each type of activity within these two categories.

Table III.3. Co-Curricular Activities in Entrepreneurship

Type of Activity	Number of Universities
Exploratory Learning Opportunities	
Entrepreneurship clubs	8
Lectures and speakers	7
Workshops and seminars	6
In-Depth Experiential Learning Activities	
Business plan competitions	7
Internships	6
Venture incubators	5
Fifth-year fellowships	2

Source: Site visit interviews.

Exploratory Learning Opportunities

An important step in creating a university-wide initiative is to expand awareness across various schools on campus and in the surrounding community. Therefore, all KCI universities offered some activities to increase exposure to entrepreneurship as well as to provide an opportunity to discover what entrepreneurship is about. These activities were not intensive and aimed to attract students who might not have been interested in activities with longer time commitments. They fell into three general categories:

1. ***Student Clubs.*** All universities had student entrepreneurship clubs that received sponsorship from KCI. While some clubs had existed prior to KCI at six universities, all the initiatives expanded this area. The clubs helped raise general awareness, educated the campus and community about entrepreneurship, provided networking opportunities for their members, and helped students discover their interests together. Some student clubs also provided outreach to local businesses and worked with the entrepreneurship centers to help organize speaker events and workshops. Some clubs were chapters of national organizations such as the College Entrepreneurs Organization and Students in Free Enterprise.
2. ***Lectures and Speakers.*** Seven universities offered one-time lectures or ongoing lecture series that were open to all students and faculty, and sometimes the surrounding community. The goal of these open lectures was to help inform the university community and generate interest in entrepreneurship. Topics and speakers varied to draw in a wide range of students and faculty. For example, one university offered a lecture series on technology and another series that brought international experts from North and South America to discuss family enterprise. Some universities invited well-known speakers to

attract wide audiences. For example, the winner of the television program “The Apprentice” was a speaker at one university, and his visibility as a TV star helped draw a large audience. A few universities tied some of their lectures to coursework. For example, guest speakers for campus-wide lectures were sometimes also invited to speak in specific classes.

3. ***Workshops and Seminars.*** Six of the eight universities offered workshops or seminars related to entrepreneurship. These events were typically longer than the lectures, and attendees were often required to sign up in advance. While these workshops were not structured courses taken for credit, they did provide participants with the opportunity to learn about and develop some entrepreneurial skills. The sessions varied in length and content and served different purposes, targeting disparate audiences. Some were open to everyone—including members of the surrounding community—and aimed to draw in as wide and diverse an audience as possible. For example, one university offered a two-hour workshop on social entrepreneurship and a two-day “Entrepreneurship 101” workshop with sessions on the philosophy, principles, and practices of entrepreneurship; entrepreneurial skill sets; the one-page business plan; and the market for new ventures. To provide all entering freshmen with an overview of entrepreneurship, another university held a “boot camp” that consisted of a mandatory set of seminars over several days during orientation week.

In-Depth Experiential Learning Activities

Other co-curricular activities provided opportunities for interested students to focus more intensely on build their entrepreneurship skills or develop ideas into ventures. All KCI universities offered a few in-depth experiential learning activities, such as:

- ***Business Plan Competitions.*** Seven of the eight universities included a business plan competition in their entrepreneurship initiative. Most of the competitions were open to all students at the host university, but some restricted participation to students in a particular school or course, or to a particular year.¹ For example, in one decentralized initiative, the business competition was open only to students at the music school. In some cases, faculty and even community members could participate. To appeal to a broad range of students, the competitions at three universities offered separate tracks or prizes for commercial and social entrepreneurship, and another university included five different categories in its competition.² Supports such as seminars,

¹ At some universities, business schools ran business plan competitions prior to KCI, but after KCI, participation was opened campus-wide.

² This university’s business plan competition included separate categories for arts and performing arts, humanities, social sciences, natural sciences, and Internet-based plans.

mentors, and workshops were offered to help participants prepare. Winners of the competitions received cash prizes ranging from \$2,500 to \$50,000. While most of these competitions were small and local, two universities also sponsored preexisting MBA-level competitions that were much larger and were open to students from around the country.

- **Internships.** Almost all the universities offered internships in entrepreneurship, supported by the KEIP, prior to KCI. Most of these internships were offered through the business schools and were designed to expose students to entrepreneurs in both for-profit and non-profit settings. Since receiving the KCI grant, universities have continued to build upon internship opportunities provided through the KEIP, but each approached expanding internship opportunities differently. Some opened the internship programs to non-business students, and others created new internships directly tied to coursework. For example, the two universities offering minors in entrepreneurship at their colleges of arts and sciences included participation in an internship as a requirement for the minor. Some other universities also offered students course credit and/or stipends for participating in internships. The length of internships varied across universities, and some offered them over the summer. At least one university's internships in entrepreneurship were part of broader internship programs that matched other students with internships unrelated to entrepreneurship.
- **Venture Incubators.** Five universities provided support for developing new student ventures, though the purpose and design of their venture incubators varied. Three universities encouraged new student businesses by providing support such as space, computers, access to databases, and informal mentors. A fourth university had an incubator strictly for social entrepreneurship ventures. This "Social Justice Incubator" provided students with seed funding, mentoring, faculty consultations, and group discussions to engage in dialogue about social entrepreneurship. At another university a center for nursing entrepreneurship served as an incubator and operated as a lab to develop ideas and test new models of nursing care.
- **Fifth-Year Fellowship Programs.** Two universities offered fellowships for students interested in pursuing entrepreneurship studies for an additional year beyond their regular undergraduate studies. Both programs were small—including between one and four students in the first year—but planned to expand in later years. The application process for the program at one university required students to describe their plan of study and submit an essay on their goals for the project; just under half the applicants were accepted. At both universities, students received free tuition during their fifth year, and one program provided students with free university housing and a stipend each semester that year.

The challenges associated with implementation of co-curricular activities were minor compared to those faced by curriculum development. Because universities do not typically have formal approval processes for such activities, the co-curricular challenges related primarily to increasing access to, rather than availability of, the activities. For example, many students at the commuter universities have little time for co-curricular activities. These students often work and spend only the minimum necessary time on campus to attend classes. The specific location of co-curricular events could also present challenges, particularly at universities with multiple campuses or on campuses where the entrepreneurship center is not close to all the schools. To maximize participation, universities held most entrepreneurship activities and events in locations that are easily accessible to most students and faculty. In two cases, entrepreneurship initiatives established satellite offices in locations more convenient for some types of students.

Faculty Development Opportunities

Integral to spreading an initiative campus-wide is engaging faculty from different schools. While course development grants encouraged faculty to develop and teach courses, faculty were also needed to lead other entrepreneurship activities. In addition, the initiatives hoped to generate general interest in entrepreneurship among faculty. To encourage this interest, many of the co-curricular lectures and workshops discussed above were open to faculty. In addition, universities offered various professional development opportunities targeted specifically to faculty, to develop their skills and support their exploration of entrepreneurship (Table III.4).

Table III.4. Faculty Development Activities in Entrepreneurship

Type of Faculty Development	Number of Universities
Outside training in entrepreneurship	6
On-site training workshops	4
Faculty seminars or study group meetings	3
Innovations fund	1

Source: Site visit interviews.

External Conferences or Workshops. Some initiatives provided small stipends and travel funds from the KCI grant to allow faculty to attend conferences on entrepreneurship at other universities. For example, several universities sent interested faculty to the Experiential Classroom at Syracuse University, and a few also sent faculty to Stanford University's program for engineers and scientists interested in bringing entrepreneurship content into their courses.

On-Site Training Workshops. Several initiatives offered their own professional development workshops in entrepreneurship for faculty. Topics included networking,

technology transfer, and methods for incorporating entrepreneurship into courses in their field. While most workshops were held on campus, one university also held one-day off-campus retreats. Another university held a three-day faculty summer institute, open to its own faculty and those from some non-KCI universities, that taught participants about the experiences of entrepreneurs and offered them strategies for infusing entrepreneurship into their classes.

Ongoing Faculty Seminars and Meetings. Some initiatives offered other forms of professional development, focused on bringing groups of faculty together to discuss entrepreneurship. These seminars provided (1) an environment for the sharing and discussion of new ideas or concerns, (2) a way to network and encourage participation in the entrepreneurship initiative, and (3) guidance in developing new courses. In some cases, these seminars also encouraged cross-disciplinary discussion, which helped develop faculty interest in interdisciplinary work.

Funds for New Entrepreneurship Programs. One initiative offered an “Innovations Fund” that provided seed money for the development of new programs in entrepreneurship. This fund was targeted (though not limited) to faculty, as a way to get them involved in the initiative as component leaders. For example, one effort initiated through this fund was a program in Artistic Entrepreneurship, which provided courses and co-curricular activities to help artistically inclined students develop ventures.

While these efforts have encouraged faculty support and participation, greater support and involvement is needed to sustain the entrepreneurship initiative. Thus, universities must continue to develop and expand upon their faculty development efforts. These issues and strategies will be discussed further in Chapter IV.

EXPANDING ENTREPRENEURSHIP RESEARCH

To build a strong research base for entrepreneurship and draw in more faculty, almost all KCI universities promoted entrepreneurship research as a component of their initiatives. As shown in Table III.5, strategies include (1) providing grants for faculty to conduct research in entrepreneurship, (2) providing similar grants for students, (3) hosting conferences and speakers on entrepreneurship research, and (4) creating databases of

Table III.5. Strategies for Supporting Entrepreneurship Research

Strategy	Number of Universities
Support for faculty research in entrepreneurship	5
Grants for student research in entrepreneurship	4
Research conferences and visiting scholars	5
Databases of entrepreneurship literature	2

Source: Site visit interviews.

academic research related to entrepreneurship. Some KCI universities created organizational structures, such as institutes, centers, or committees, to coordinate and support these activities.

Support for Faculty Research. Five initiatives offered grants for faculty research projects in entrepreneurship. For example, the Center for Research on Innovation and Entrepreneurship at one university's law school made awards to eight faculty from five different schools in the first year of its grant program. Research topics included "The Effects of Intellectual Property Policy on Engineering Design and Experiential Learning Courses" and "Users and Product Developers: A Model for Communal Innovation and Entrepreneurship, a Pilot Project to Collect Data and Design an Empirical Study on the Impact of Early-Stage Access to Affordable Intellectual Property and Business Formation Legal Services on the Innovative Process." Across the universities, research grants ranged from \$5,000 to \$20,000. Smaller amounts typically supported faculty conducting research as part of their regular responsibilities, while larger amounts also compensated for leave time. For example, the \$20,000 grants offered by one initiative provided faculty with leave for a full school year to work on their research. Some initiatives offered research funds through the same grant program that underwrote course development. A few initiatives had designated faculty component leaders responsible for initiating research studies. For example, one is creating a consortium of scholars to conduct a study of entrepreneurship in the state.

Grants for Student Research. Half the KCI universities provided support for undergraduate and/or graduate students to conduct research related to entrepreneurship. Students applied for funding to conduct research during the academic year or the summer. Grants were typically smaller than those given to faculty, ranging from \$250 to \$5,000. While research opportunities for students at three of the four universities were available to graduate students only, one university awarded \$3,000 fellowships to support 12 undergraduate students conducting research in the summer of 2004 and 15 in 2005. Rather than research *about* entrepreneurship, these fellowships supported research to develop products and services to be the focus of future businesses or social entrepreneurship ventures. At other universities, some research focused on producing papers on entrepreneurship for publication in journals or presentation at conferences, while in other cases student researchers developed case studies to be used as part of course curriculum.

Conferences and Lectures. Five initiatives promoted entrepreneurship research by hosting events such as research conferences or lectures by visiting scholars. For example, one university hosted a conference entitled "Commercializing Innovation" that brought together researchers from various fields. Through its Visiting Scholars and Entrepreneurs program, another university's initiative provided financial support to bring scholars to campus to give presentations, workshops, and other activities for students and faculty.

Databases of Entrepreneurship Literature. Two initiatives have created databases of academic literature on entrepreneurship. One university compiled literature related specifically to Hispanic entrepreneurship to serve as a resource for faculty and others. Another created a general index of academic literature on entrepreneurship.

BUILDING CONNECTIONS TO THE COMMUNITY

Many universities, particularly public ones, consider fostering economic development in the surrounding community to be important, and most had components of community involvement before KCI. Building community connections can also increase the visibility of entrepreneurship and help identify opportunities for students. Moreover, the community is a potential resource for developing the entrepreneurship initiative further. With the KCI grant, some universities planned to expand entrepreneurship beyond the boundaries of the campus and outward to the community. Activities include both (1) community support for the universities, and (2) university support for their communities.

Community Support for the Entrepreneurship Initiatives

Community members and local organizations can provide assistance to the entrepreneurship activities on campus in several ways. As shown in Table III.6, all universities receive some form of assistance from the community, though some activities predate KCI, and a few operate independently of it. Community members and organizations contributed to the initiative in three ways: (1) providing support to the overall initiative by getting involved in activities such as raising funds and serving on boards, (2) interacting directly with students by participating in specific component programs, and (3) serving as “Entrepreneurs-in-Residence” at some universities.

Table III.6. Community Involvement in Entrepreneurship Initiatives

Type of Involvement	Number of Universities
Community Support for Universities	8
Serving on boards	5
Raising funds	7
Teaching courses	8
Speaking	7
Judging competitions	6
Providing internships	6
Serving as Entrepreneur-in-Residence	3
University Support for the Community	7
Opening events to community members	7
Providing training, education, and consulting services	5
Working with local school districts	2

Source: Site visit interviews.

Leadership and Fund-Raising. Community members were involved in supporting the overall entrepreneurship initiatives in two main ways. One was by serving on the initiative’s advisory board. Representatives of the surrounding community were asked to serve on advisory boards for the entrepreneurship initiatives at five of the KCI universities, as discussed in Chapter II. Community members also assisted with fund-raising for almost

all the initiatives, by making donations to the program or by seeking additional sources of funding.

Teaching and Mentoring. Community involvement often entailed direct interaction between community members and students. At all universities, community members served as adjunct faculty and taught some courses in entrepreneurship. They also served as guest speakers for co-curricular lectures or for courses at seven universities. They typically served as judges for business plan competitions and helped prepare students at the universities that offered such competitions. At the six initiatives with internship programs, local businesses and community organizations provided internships to university students. In addition, community members sometimes served as mentors to students and faculty who were working on starting new ventures.

Entrepreneurs-in-Residence. Some community members were involved in both initiative-level activities and interactions with students. Three KCI universities created a special position, Entrepreneur-in-Residence or Professional-in-Residence. At two of these, the role was primarily speaking to students and others at lectures and workshops. In one case, the title was an honor awarded to one local community member each year. However, at another university the title of Entrepreneur-in-Residence was held by a community member who served as an integral staff member of the initiative, in a paid position held by a single person for multiple years. His responsibilities included many of the roles mentioned above, such as teaching courses, serving as a mentor, and securing additional funding. In addition, he had administrative duties and was involved in managing the initiative.

University Support for the Community

Entrepreneurship initiatives also provide opportunities for the university to offer assistance to potential entrepreneurs, small businesses, schools, and other organizations and persons in the local community. Seven of the KCI universities offered some form of assistance to community members, in three broad categories. The most common type of assistance was simply opening some of their co-curricular entrepreneurship activities and events to community members. Community members were often invited to attend some of the entrepreneurship lectures held on campus, space allowing. Second, five of the KCI universities provided various types of training, educational workshops, and consulting services to local small and family businesses. (The universities typically charge fees for such services.) For example, one university offered a training program, consisting of five full-day seminars, to teach entrepreneurial management skills to both professional and volunteer managers and business directors of non-profits and social service agencies. Third, community outreach for two universities included helping local school districts develop entrepreneurship programs for their students.³ For example, one university developed a

³ Another university included a K-12 program in its original KCI grant proposal but later dropped that component to focus on the university.

Young Entrepreneurs Academy to teach middle school and high school students the tools needed to start and run a business.

The degree of involvement with the local community varies widely by university. Those that historically have had stronger connections to their communities have tended to provide more community-oriented entrepreneurship activities and have more community members involved in entrepreneurship programs on campus. For example, three public universities include community building as a key component of their overall entrepreneurship initiative. Two of these are primarily commuter schools whose students have close ties to the local community. They see the entrepreneurship initiative as a way to pursue preexisting university goals of helping to spur local economic growth and activity. However, other universities have been less involved in their local communities, and are looking for ways to build connections and involve the community to a greater extent in their entrepreneurship initiatives.

CHAPTER IV

CAMPUS - WIDE AWARENESS, INTEREST, AND PARTICIPATION IN ENTREPRENEURSHIP ACTIVITIES

The success of KCI depends on the interest of faculty and students and their willingness to become involved in entrepreneurship initiatives. Without faculty to develop and teach courses and lead other activities and students to participate in them, the long-term prospects for the initiatives are dim. Although the initiatives were still in development at the time of data collection, insight into the prevailing campus attitudes toward entrepreneurship and the factors that might affect support for related activities could help future sustainability efforts. Strategies that universities are using to promote entrepreneurship on campus might also inform other universities in similar efforts.

In this chapter, we describe (1) the overall awareness of the initiative among faculty and students, (2) faculty participation in entrepreneurship activities and factors affecting it, (3) student participation and factors affecting it, and (4) strategies for promoting entrepreneurship interest and activities on campus. Much of the information in this chapter comes from university administrators, faculty, and students who were invited to speak with us during our 2005 visits because they were already involved in some aspect of their university's entrepreneurship initiative. Thus, our analysis of campus awareness, interest, and participation comes mostly from their perceptions. However, where relevant, we also include findings from the survey administered to a broader sample of faculty at seven universities in spring 2006.¹

AWARENESS OF THE INITIATIVE

The first step in engaging students and faculty in the entrepreneurship initiative campus-wide is to ensure that they are aware of the KCI programs and activities. Administrators from some universities mentioned that they anticipated low levels of awareness in the early

¹ In fall 2006, we will also administer a survey to seniors at seven of the institutions, to collect information on their awareness of and interest in entrepreneurship.

stages of the initiative, but expected it to increase over time, as the initiative developed.² Consistent with this expectation, at the time of the site visits, awareness of the entrepreneurship initiatives appeared to be low across the KCI campuses. At most universities, faculty and students in focus groups perceived that many of their colleagues and peers were not aware of the initiative. Moreover, even among faculty and students participating in entrepreneurship courses and activities, in-depth knowledge of the initiative was often lacking. However, on some campuses, stakeholders reported that awareness had been increasing over the past year, as the number of activities and courses grew and more students became exposed to them.

Awareness did appear to be higher among faculty and students in particular types of university schools. Faculty and students at five universities reported that awareness was highest in the business school, where more activities were located, than in other schools. In the decentralized initiatives, where each school designs and manages its own entrepreneurship activities, faculty and students were reportedly fairly well aware of their home school's activities, but less aware of the campus-wide nature of the initiative and the opportunities to participate outside their home school.

Results from the faculty survey—which asked a broad sample of faculty about awareness, interest, and participation in entrepreneurship activities—indicated that awareness may have been more widespread than respondents indicated during focus group discussions. About two-thirds of faculty who completed the faculty survey reported having at least some awareness of their university's entrepreneurship initiative. Most respondents also felt that there was at least some awareness among the faculty in their department. However, only one in five faculty who responded to the faculty survey reported being “very aware” of entrepreneurship initiatives and activities at their university. This deeper type of familiarity may have been what focus group participants had in mind when reporting low levels of awareness.

FACULTY PARTICIPATION AND INTEREST³

Faculty at the KCI universities could participate in the entrepreneurship initiative in numerous ways. They could be involved in the administration of the initiative by developing and managing particular program components or by serving on advisory boards, as described in Chapter II. They could also be developing and teaching courses in entrepreneurship, conducting research, or learning more about entrepreneurship through on- or off-site workshops, as described in Chapter III. Table IV.1 summarizes the key ways that faculty could be involved.

² This study will assess changes in awareness through interviews with faculty and students in spring 2009, a faculty survey in spring 2009, and a student survey in the 2009–2010 school year.

³ In this chapter, we use the term *faculty* broadly to include everyone who is teaching courses in entrepreneurship. Thus, some “faculty” could be administrative staff teaching courses or community members serving as adjuncts. However, survey respondents were all tenured or tenure-track faculty.

Table IV.1. Faculty Involvement in Entrepreneurship Initiatives

Type of Involvement	Number of Universities
Design and teach courses	8
Advocate for entrepreneurship in school	6
Lead/manage program components	6
Conduct research	6
Attend outside workshops	6
Attend university-based seminars or workshops	5
Serve on entrepreneurship committees or boards	5

Source: Site visit interviews.

Across the universities, developing and teaching courses related to entrepreneurship was the most important role of faculty. The universities' 2005 KCI progress reports indicated that the number of faculty teaching entrepreneurship courses ranged from 6 to 49, averaging 24 per university.⁴ According to these reports, about half the faculty members teaching entrepreneurship courses were tenured or on tenure track, and about half were from non-business schools.

The types of faculty teaching entrepreneurship courses differed across and even within universities. Three universities relied on adjuncts, staff, or other types of non-tenured, non-tenure track faculty to teach most of the courses in entrepreneurship. Administrators at these universities reported that they could not find tenured or tenure-track faculty, either within the existing faculty or outside the university, who were interested in and available to teach entrepreneurship. The few professors of entrepreneurship at these universities were on the business school faculty. However, in the other five universities, tenured and tenure-track faculty were the main teachers of entrepreneurship courses. In two of these universities, leadership reported that senior faculty taught most entrepreneurship courses. Junior faculty, because of their focus on working toward tenure, seldom participated in this way. Even at one university where adjuncts taught most entrepreneurship courses, administrators from one of the schools involved in the decentralized initiative were determined to give the entrepreneurship initiative credibility by having senior faculty teach the courses.

Two key factors seemed to have had a negative effect on faculty involvement and interest. One reason for low participation was that faculty were too busy to devote time to entrepreneurship activities. During the sites visits, faculty and administrators at half the universities reported that their colleagues had little time in their schedules to pursue research

⁴ This average is based on the six universities that reported data supporting this analysis. Later information suggests that the number of faculty teaching entrepreneurship at the two universities that did not report this information in their 2005 progress reports was within this range.

or develop and teach courses in entrepreneurship. The second factor was the belief held by many that entrepreneurship was not relevant to the work they were doing. In discussions, administrators and faculty from most universities reported that many of their colleagues did not believe that entrepreneurship education was part of the mission of their university, school, or department. Indeed, senior faculty at two universities publicly expressed their concern that the KCI grant was incompatible with their schools' liberal arts tradition. Faculty at another university reported that some of their peers in several of the professional schools felt that entrepreneurship would distract from their mission to educate students to become professionals in their fields. Other factors mentioned that dissuaded faculty from participating were that entrepreneurship (1) lacks a research base and is therefore not a credible field; and (2) does not advance the careers of faculty, especially those seeking tenure.

The faculty survey confirmed the aforementioned factors affecting involvement and interest (Table IV.2). Over 4 in 10 faculty (42 percent) responding to the survey indicated that they were too busy to become involved in entrepreneurship activities, and nearly 3 in 10 (29 percent) reported that entrepreneurship does not fit with their discipline or interest. Level of awareness was another common factor: a quarter of the faculty reported that they lacked sufficient information to become involved.

Table IV.2. Faculty Reasons for Not Being More Interested or Involved in the Initiative

Reasons Not Involved/Interested	Percentage of Faculty
No time/doesn't fit into my schedule/no release time	42
Doesn't fit with my discipline/interests	29
Not aware of any opportunities/lack sufficient information	26
Interested, but not enough of a priority	5
Won't advance my career/focusing on activities related to attaining tenure	4
Already very involved in entrepreneurship activities/can't possibly do more	3
Retiring/leaving the university soon	3
Don't think entrepreneurship should be part of curriculum	3
Don't like program/doesn't fit with my vision/no place for me	1
Insufficient funds to develop courses	1
Other	18
Sample Size	351

Source: KCI faculty survey, spring 2006.

Note: Interviewers recorded respondents' open-ended answers to questions asking about their reasons for not being more involved or interested in participating. The answers were then coded into these response categories. Because respondents could provide as many reasons as they wished, the number of responses is greater than the number of respondents, and the percentages sum to more than 100.

STUDENT PARTICIPATION AND INTEREST

Across the universities, students had opportunities to participate actively in entrepreneurship courses and activities. All universities offered at least one undergraduate entrepreneurship course and several opportunities for students to participate in co-curricular activities such as business plan competitions, internships with start-up companies, and entrepreneurship clubs (Table IV.3).

Table IV.3. Entrepreneurship Activities for Students

Activity	Number of Universities
Courses	8
Clubs	8
Lectures/workshops	8
Competitions	7
Concentration for business students	7
Internships	5
Minor/major for non-business students	5
Research	4
Student-run businesses	2
Fifth Year	2

Source: Site visit interviews.

Note: These activities at most universities are part of the entrepreneurship initiative funded by KCI. However, some activities listed here operate independently of the initiative.

As the KCI universities have expanded their entrepreneurship course offerings and activities, the number of undergraduate students participating has increased. Across the six universities reporting this data in their 2005 progress reports, undergraduate student enrollments in entrepreneurship courses increased an average of 32 percent from the 2003–2004 school year to the 2004–2005 school year. Much of this increase appears to have come from a rise in the participation of non-business students. Although the school affiliation of students enrolled in entrepreneurship courses in prior years was not reported in the 2005 progress reports, we assume that most were business majors. Among the five universities reporting this data, about 34 percent of enrollees in entrepreneurship courses in the 2004–2005 school year were non-business students.⁵

⁵ The 34 percent is an average across two universities with few or no non-business students in entrepreneurship courses and three universities where about 66 percent of enrollees in such courses were non-business students.

Universities did not report participation rates in co-curricular activities in their annual progress reports, but in on-site interviews, initiative staff and students gave anecdotal evidence that students actively participated in entrepreneurship activities, such as competitions and clubs. For example, students at one university reported that their entrepreneurship club had 50 to 60 registered members. At another university, students started two new entrepreneurship clubs. In addition, the number of teams competing in business competitions has grown as several universities opened their competitions to all students, not just those in the business school. For example, one university's business plan competition had about 65 teams competing in 2004 and 100 teams in 2005. Attendance at lectures varied considerably by topic, but staff at one university estimated that it averaged between 50 and 60, mostly students. One research grant program involved 12 students in its first year and 15 the next. Certain intensive activities, such as the Fifth-Year Fellowship programs, had fewer participants.

Administrators, faculty, and students at all eight universities indicated that students were generally interested in entrepreneurship courses and activities. Students interviewed, who were typically already participating in some way, expressed strong support. They often attributed their interest to a desire to start their own business and, for non-business students, a way to think about careers in their chosen fields. For example, students majoring in Spanish may not want to start their own business, but entrepreneurship might help them explore innovative ways and careers in which to apply their Spanish skills. Across schools, students taking entrepreneurship courses mentioned the appeal of hands-on classes that allowed them to develop their entrepreneurial ideas and hear from outside experts about their ventures. The same types of respondents offered four reasons that students might not participate:

1. Students' academic schedules and other commitments might not allow for participation. For example, at the two commuter universities, many students were in school part-time and also holding down jobs, which left little time for extracurricular activities. In addition, students in some academic programs, particularly graduate programs, might find that their schedules left little room for electives in entrepreneurship.
2. Respondents at several universities mentioned that some non-business students perceive entrepreneurship as a concept just for business students. As with faculty, they might not see the applicability of entrepreneurship to their disciplines. This perception was particularly strong at initiatives where the KCI center was physically located within the business school building.
3. Students from at least one university reported that students might find it intimidating to take classes that are housed in a different department or school, even cross-listed courses. For example, history majors might be intimidated by a course in entrepreneurship offered by the business school.
4. Although administrators in all universities confirmed that entrepreneurship courses were generally open to all students, administrators and students in

some universities indicated that several factors limit students' ability to take courses outside their home school, including advisors discouraging students from taking courses in other schools, and students in the school where the course is being taught often filling the course before it can be opened to students from other schools.

STRATEGIES FOR PROMOTING AWARENESS AND PARTICIPATION IN ENTREPRENEURSHIP ACTIVITIES

Entrepreneurship staff at all universities expressed interest in raising campus awareness of and interest in entrepreneurship. While increasing awareness of the initiative and making it accessible to everyone interested are recognized goals, administrators in several universities did not consider it realistic to expect all faculty and students to participate actively. Only one university, through its "boot camp" for freshmen, expected eventually to involve all students. Strategies administrators used to promote entrepreneurship and encourage interest and participation across campus included (1) expanding the definition of entrepreneurship, (2) developing a base of supportive and involved faculty, (3) increasing availability of entrepreneurship activities for students, and (4) using marketing strategies to publicize events and activities.

Expanding the Definition of Entrepreneurship

When introducing entrepreneurship to non-business schools, several universities found, either during the proposal stage or after the KCI grant award, that the term *entrepreneurship* did not translate well. For many faculty and students, it meant simply "starting a business," and they did not see its relevance to their fields, such as English, history, or Spanish. To be more inclusive, leaders of many of the entrepreneurship initiatives developed a broader definition and promoted it across campus. Examples include:

- Transforming ideas into an enterprise that generates value
- Process through which individuals and groups take advantage of their knowledge and resources to identify and pursue opportunities, initiate change, and create value in their lives and the lives of others
- A process that can lead to creative solutions to social problems or the formation of new and innovative enterprises

Leaders of half the initiatives, as suggested by some of these definitions, have also embraced social entrepreneurship as a way of broadening the appeal of the initiative. Indeed, the name of the minor at one university is "Entrepreneurship and Social Enterprise." The business plan competitions at two universities allow teams to enter in either a commercial or a social venture category, and another university's competition has a special Social Entrepreneurship prize. The introduction of social entrepreneurship has had particular appeal to non-business majors and faculty members in liberal arts colleges. For

example, non-business majors at one university mentioned that social entrepreneurship has been important to engaging non-business majors in entrepreneurship activities.

While broadening the definition appears to gather more interest and participation, a disadvantage could be that the initiative becomes diluted. The idea of entrepreneurship as value creation could be lost as various faculty members develop and teach courses that touch only loosely on this concept. An administrator of one KCI initiative indicated that he rejected several proposals for grant funds because, in responding to the broad definition in the request, the proposed projects did not address sustainable value creation.

Developing a Base of Supportive Faculty

Universities worked to increase faculty interest and participation in entrepreneurship in two key ways: (1) by working with existing faculty, and (2) by hiring new faculty with interest in entrepreneurship. To increase interest and support among existing faculty, leaders of the universities' entrepreneurship initiatives used various strategies:

Designate Champions. One overall strategy has been to recruit faculty from the various university schools to be champions of or advocates for the initiative. Six universities have designated champions among interested faculty to lend the initiative credibility and explain to their school and departmental colleagues the value of entrepreneurship in different settings (Table IV.1).

Identify and Appeal to Faculty with Potential Interest. Another strategy has been to identify faculty with potential interest in entrepreneurship. For example, at one university, entrepreneurship center staff reported reading the course catalogues to identify faculty whose interests might align with entrepreneurship. They then appealed to those faculty to become involved in the initiative. Initiative leaders and deans at other universities have approached faculty they know about becoming involved.

Offer Supports. As described in Chapter III, six universities offer faculty support and incentives to develop and, in some instances, teach entrepreneurship courses. These incentive programs appear to have encouraged faculty who might otherwise not have participated in entrepreneurship to develop a course related to it.⁶ Other incentives include offering faculty opportunities to attend workshops at other universities and grants to conduct research in entrepreneurship.

Since these strategies may not be sufficient to overcome other barriers to faculty participation, such as full schedules and career objectives, universities also have hired new faculty in entrepreneurship. One university has filled an endowed chair in entrepreneurship, and several have begun raising endowments for future chairs. Another university has committed to hiring new faculty whose salaries will be shared between the entrepreneurship

⁶ As shown in Table IV.2, few faculty survey respondents reported lack of funding for course development as a barrier to participation, however, even those at universities without such incentives.

center and a school. New tenured or tenure-track faculty with credentials in entrepreneurship and a foundation of entrepreneurship courses might help persuade some existing faculty that entrepreneurship is a rigorous discipline worthy of their support and participation.

Increasing Availability of Entrepreneurship Activities for Students

Providing a variety of engaging activities may be the most effective way to boost awareness and participation among students. Stakeholders at several universities expected campus awareness of the entrepreneurship initiative to increase along with the number of programs and activities available, as students who enjoy a course or activity promote it to other students. As discussed in Chapter III, KCI universities are expanding their course offerings and developing a variety of co-curricular activities for students. Some of these, such as freshman seminar courses and open lectures, are specifically designed to introduce large numbers of participants to entrepreneurship. Initiatives are also employing strategies to ease access to entrepreneurship programs for students, such as cross-listing courses across schools and holding co-curricular activities in central locations. A few universities were faced with the need to expand the capacity of specific popular programs to accommodate all the interested students.

Marketing Entrepreneurship Initiatives

Although universities were still developing their entrepreneurship initiatives at the time of the site visits, several were actively promoting their newly created centers and activities. By fall 2005, six of the eight universities had developed informative entrepreneurship websites that students and faculty could access to learn more about the offerings. Entrepreneurship centers at several universities have also been publicizing activities through email, newsletters, and campus postings.

Entrepreneurship center administrators also relied on word of mouth to spread information about the existing entrepreneurship activities. At several universities, students manned information desks at campus centers to publicize activities and answer students' questions. Another method some universities employed to raise awareness and interest in courses was through academic advisors. For example, administrators at one university's entrepreneurship center planned to meet with advisors to inform them of the new offerings in entrepreneurship.

CHAPTER V

CONSIDERATIONS FOR PLANNING AND SUSTAINING A CAMPUS-WIDE ENTREPRENEURSHIP INITIATIVE

This report described the early development and implementation experiences of the eight KCI universities as they established their campus-wide entrepreneurship initiatives. In this concluding chapter, we revisit some of the topics in those discussions and present several important issues that other universities should consider as they plan and develop their own such initiatives. We conclude with a discussion of factors the KCI universities should take into account as they make plans for sustaining their initiatives beyond the life of the KCI grant.

CONSIDERATIONS FOR DEVELOPING AND IMPLEMENTING A CAMPUS-WIDE INITIATIVE

This study of the KCI universities suggests important considerations for the development and implementation of entrepreneurship initiatives at other universities. Although the unique characteristics of each university will affect how it develops and implements its own initiative, consideration of the issues that underlie key decisions KCI universities made may be useful to other universities planning new initiatives. Key considerations fall into two main categories: (1) establishing a clear identity for the initiative on campus, and (2) implementing the initiative's programs and activities. For each of these areas, we discuss common issues identified at the KCI universities and the different strategies adopted to address them. When applicable, we also describe the advantages and disadvantages of different approaches.

Establishing an Identity on Campus

Establishing an identity for the entrepreneurship initiative is important in determining the role it will play on campus and how it will be perceived by the students, faculty, and others in the university community. In creating an identity, the KCI universities had to distinguish their new initiatives from other entities and programs on campus and communicate KCI's position as campus-wide. In establishing a campus-wide identity, other

universities should consider (1) how to define entrepreneurship, (2) how to identify key stakeholders and partners, and (3) how to organize the initiative within the university.

Defining Entrepreneurship. How entrepreneurship is defined can affect the breadth of its appeal to both students and faculty. Leaders of several initiatives cited the need to broaden the definition beyond simply the creation of new businesses in order to encourage interest among faculty and students outside the business school. According to administrators, faculty, and students, adoption of a broad and inclusive definition of entrepreneurship was integral to reaching many who had not previously realized that the subject was relevant to them or their fields. Thus, universities tried to communicate and promote the initiative in a way that had broad appeal, tying entrepreneurship to such disciplines and departments as the arts, English, nursing, and social work. In addition, KCI leaders found that making social entrepreneurship an important part of their initiatives increased interest among many who were originally skeptical about the legitimacy of entrepreneurship in non-business fields. However, one university leader cautioned that too broad a definition could water down the initiative and leave too much open to interpretation, so that virtually any course or project could qualify as entrepreneurial.

Identifying Key Stakeholders and Partners. The key stakeholders and partners identified with the initiative can affect its development and signal its importance and place within the university. When these people are a diverse set from across the university, the initiative may be more likely to be perceived as campus-wide, and entrepreneurship programs are more likely to develop across a variety of schools. While administrators play a significant role in the development of the initiative, faculty must also become key stakeholders to ensure depth of support and involvement. As discussed in Chapter II, many universities involved a broad cross-section of administrators and faculty as staff or as members of the initiative's boards, which appeared to foster a substantial and diverse development of curricula and programs for students in a range of schools. Initiatives overseen by university leaders such as the chancellor or provost, or by a board of deans from different schools, are more easily perceived as campus-wide than those led by a single school.

Organizing the Initiative Within the University. Where the initiative fits within the university context can affect how it is perceived and the type of participants it attracts. Three key considerations when deciding how to structure the initiative within a university are:

1. ***Whether to Adopt a Centralized or a Decentralized Structure.*** While each university campus is unique, the organizational structure of their entrepreneurship initiatives falls into two general types: centralized and decentralized. Initiatives with centralized organizational structures created an environment more conducive to collaboration between different schools, and opened up opportunities for schools to engage in cross-disciplinary endeavors. While cross-disciplinary collaboration is not necessary to ensure campus-wide implementation (as evidenced by the decentralized initiatives), stakeholders at some centralized initiatives believed that entrepreneurship is particularly

relevant at the intersections of disciplines and that innovative ventures benefit greatly from the combined perspectives of people with different fields of expertise. Decentralized initiatives tended to be less conducive to collaboration between schools, but they engendered a greater sense of ownership of the initiative at different schools, since each school took responsibility for its own entrepreneurship programs and activities. In addition, specific activities offered by decentralized initiatives were often more tailored to the interests of students in a particular school, which may have made entrepreneurship seem more relevant to students.

2. ***Whether the Business School Should Lead the Initiative.*** Since entrepreneurship curricula and activities have traditionally been located primarily within business schools, these schools can often offer a wealth of knowledge and expertise on the subject. For this reason, business schools took the lead in the new campus-wide entrepreneurship initiatives at some KCI universities and played a major role at others. However, at initiatives led by business schools, university faculty and students were more likely to view entrepreneurship as a business concept, which made it more difficult to attract diverse participants. Even an entrepreneurship center that was independent from the business school—but physically located in a business school building—found establishing a campus-wide identity challenging.
3. ***Whether to Locate the Initiative Within an Existing Center.*** Some KCI universities forged organizational affiliations between their initiatives and existing centers or offices focused on entrepreneurship. New initiatives can benefit from the institutional expertise of these entities, and locating an initiative within an existing unit can facilitate sharing of space and staff resources. However, when existing centers or institutes are housed within the business school, such affiliations can hinder the perception of the initiative as campus-wide and thus discourage the participation of students and faculty from other schools. While many of the KCI universities had established entrepreneurship centers or institutes within their business schools before the KCI, few located their new initiatives in them.

Implementing the Initiative

Universities implementing new entrepreneurship initiatives must also decide how to develop programs and staff them appropriately. The KCI universities took different approaches in hiring staff to lead and operate their new initiatives, each with its own advantages and disadvantages. Implementation also necessitated strategies to increase the availability of courses and activities and to ensure faculty and student participation.

Staffing the Initiative. Key staff members are responsible for day-to-day operations and often determine the direction of the initiative. Therefore, the types of people chosen to staff the initiative can play a major role in implementation. The backgrounds and levels of

experience of initiative staff can affect the development, as well as the credibility, of the initiative. Two major staffing issues to consider are:

1. ***Whether to Hire a Director from Within or Outside the University.*** Some KCI universities hired directors from within, while others hired external ones. There are advantages to each approach. Directors from inside were familiar with the university culture and knew how to maneuver through the bureaucracy. Internal directors also had existing networks of contacts with administrators, faculty, and local community members—contacts that proved useful in building the initiative and obtaining resources. However, universities that selected internal directors often found that the demands on the director's time were a major constraint. Internal directors held preexisting positions that prevented them from focusing exclusively on the initiative.

In contrast, directors recruited from outside the university saw the directorship as their primary responsibility and were typically able to devote full time to the initiative. External directors also brought expertise in entrepreneurship, an asset that the existing faculty at some universities might have lacked. However, directors from outside the university needed to adjust to their new environment, which was particularly difficult for those whose backgrounds were not in academia. Such directors might lack credibility among other faculty and thus have more difficulty in winning their support for the initiative. In some cases, initiatives balanced the strengths of their director with those of other key staff.

2. ***Whether to Rely on Tenured and Tenure-Track Faculty or Adjunct Faculty.*** Faculty were involved in the initiatives in various ways, including teaching entrepreneurship courses, leading individual program components, and serving as key staff. To ensure the sustainability of the initiative by developing support among those with long-term ties to the institution, universities sought to engage tenured and tenure-track faculty in their entrepreneurship initiatives. Other advantages to staffing the initiative with this type of faculty are their academic experience and their credibility among other faculty. Adjunct faculty, in contrast, often lack the academic credentials and expertise valued in a university environment. However, adjuncts can bring a wealth of real-world knowledge and entrepreneurial experience to the courses they teach, and they can help to build connections with the surrounding community. The KCI universities also found adjuncts considerably easier to recruit.

Engaging Faculty. Since developing a base of supportive and involved university faculty is key to creating a sustainable campus-wide initiative, KCI universities employed a variety of strategies to engage them. Several KCI universities provided grants to faculty for entrepreneurship curriculum development, and one university also provided release time. In addition, many universities offered research opportunities, such as grants for faculty, to help build a stronger research base for entrepreneurship, which will enhance its credibility as an

academic discipline and thus eventually attract more faculty. Other strategies to engage faculty included offering training workshops and seminars to help spark their interest in entrepreneurship. Universities also worked to identify and appeal directly to faculty with potential interest and designated champions to advocate for the initiative among their colleagues. These strategies were not always sufficient to overcome other barriers to faculty participation, however, so some universities also hired new faculty in entrepreneurship.

Increasing Curricular Offerings. Increasing the number of entrepreneurship courses and programs of study available to students is one of the most important components of expanding entrepreneurship education campus-wide. Attracting faculty to develop and teach the courses is only one step toward this goal. At many universities, the course approval process impedes the integration of new courses into the curriculum. At each of the KCI universities (particularly the public ones), the process involves a lengthy series of reviews. However, for some courses, universities were able to take advantage of special types of course structures that used streamlined approval processes. One example is the freshman seminar structure—a special type of small, discussion-intensive course for new students. Several universities used this structure to offer introductory courses in entrepreneurship. Others used an existing “special topics” course number as a means of avoiding, or at least postponing, the formal approval process. Such course numbers are available in many departments to allow faculty to introduce courses on new topics, typically for one year only, without the formal approval process needed for a new course number.

Ensuring Accessibility of Programs for Students. The accessibility of programs for students can affect participation rates and thus the overall success of the initiative. Various university stipulations and procedures impeded the enrollment of some students in entrepreneurship courses, particularly those outside their home schools. To overcome these barriers, several universities developed courses in a variety of schools and cross-listed some courses to ease enrollment for students, and one university exempted entrepreneurship courses from its usual tuition transfer agreements between schools. Universities also provided a wide range of co-curricular activities—from introductory lectures to opportunities for building entrepreneurial skills and developing ventures—which offered alternatives for students who could not take entrepreneurship courses. However, some types of students, particularly those who commute to school or hold full-time jobs, found co-curricular activities less convenient. In addition, location seemed to affect the accessibility of the center and program activities; distance was sometimes a barrier to student participation at universities where the center was far from the main campus. Universities addressed this by holding most activities on the main campus, and two initiatives established satellite offices.

CONSIDERATIONS FOR SUSTAINING THE INITIATIVE

By the time of the fall 2005 visits, the eight KCI universities had already made most of their development decisions and were working to implement the activities they had proposed in the KCI grant applications. Although implementation was their focus during the early stage of the KCI grant period, all were aware of the need to plan for the future. In addressing how to sustain the initiative, universities began identifying possible sources for

continued funding and developing a base of support within the university community. When the MPR research team returns to conduct the spring 2009 site visits, we will document the progress the universities have made in implementing the initiative, as well as in securing funds and building the leadership necessary for sustaining the entrepreneurship programs and activities.

Identifying Strategies for Raising Funds. Potential sources of funding to sustain the entrepreneurship initiatives beyond the end of the KCI grant include the same ones that provided matching funds for the grant—the university, the surrounding community—including businesses, foundations, and individuals—alumni, and state governments. The specific strategies planned, and which stakeholders bore primary responsibility for fundraising, varied with the structure and context of the initiative and its university. In decentralized initiatives, for example, each participating school was expected to secure funds to sustain its own programs. Universities with strong community ties relied on their local connections to provide financial support, and some public universities considered the state government a potential source of funding. In addition, universities looked to endowments to help sustain their initiatives. Two initiatives had the beginnings of their own endowments, raised from community members or alumni. Several others potentially had access to endowment funds from existing university centers, institutes, or programs. In addition, one university had begun to raise funds to support endowed chairs in two different schools.

Ensuring Continued Leadership Support for the Initiative. In addition to continued funding, the sustainability of entrepreneurship initiatives depends on ongoing leadership and faculty support from within the universities. Many of the initiatives relied heavily on the vision and energy of a few key leaders—or even just one—and even at the time of the early site visits, some were already grappling with the need to plan for succession. Stakeholders at several universities expressed concern about the fate of their initiatives if the director or other key leaders were to retire. Several stakeholders at another university believed the initiative needed more time than their original part-time director could devote to it as it expands. Directors of several initiatives emphasized the importance of securing support from several different university administrators and schools so that the initiative could endure the loss of any one person or any change in support from one school. Thus, while the KCI universities had different concerns, based on their own experiences, about how continued leadership should be provided, all agreed that it was key to the survival of the initiative.

REFERENCES

- Baxter, Gail, Linda Rosenberg, and Laura Kalb. The Kauffman Campuses Initiative Grant at Howard University. Draft report to the Ewing Marion Kauffman Foundation, July 31, 2006.
- Cone, Judith. "Teaching Entrepreneurship in Colleges and Universities: How (and Why) a New Academic Field Is Being Built." Kauffman Thoughtbook 2005, pp. 72–79.
- Deke, John, Geraldine Mooney, Linda Rosenberg, and Julie Ladinsky. The Kauffman Campuses Initiative Grant at the University of Illinois at Urbana-Champaign. Draft report to the Ewing Marion Kauffman Foundation, March 22, 2006.
- Hulsey, Lara, Gail Baxter, Geraldine Mooney, and Laura Kalb. The Kauffman Campuses Initiative Grant at Florida International University. Report to the Ewing Marion Kauffman Foundation, September 15, 2006.
- Hulsey, Lara, Geraldine Mooney, Laura Kalb, John Deke, and Dan Gundersen. The Kauffman Campuses Initiative Grant at University of Texas at El Paso. Report to the Ewing Marion Kauffman Foundation, July 10, 2006.
- Kim, Benita, Gail Baxter, Lara Hulsey, and Laura Kalb. The Kauffman Campuses Initiative Grant at the University of North Carolina at Chapel Hill. Draft report to the Ewing Marion Kauffman Foundation, May 19, 2006.
- Kim, Benita, Linda Rosenberg, and Julie Ladinsky. The Kauffman Campuses Initiative Grant at Wake Forest University. Report to the Ewing Marion Kauffman Foundation, July 24, 2006.
- Rosenberg, Linda, Geraldine Mooney, John Deke, and Julie Ladinsky. The Kauffman Campuses Initiative Grant at the University of Washington at St. Louis. Report submitted to the Ewing Marion Kauffman Foundation. Princeton, NJ: Mathematica Policy Research, Inc., January 30, 2006.

Rosenberg, Linda, Dan Gundersen, Lara Hulsey, and Laura Kalb. The Kauffman Campuses Initiative Grant at University of Rochester. Draft report to the Ewing Marion Kauffman Foundation, April 18, 2006.

Streeter, Deborah H., John P. Jaquette Jr., and Kathryn Hovis. University-wide Entrepreneurship Education: Alternative Models and Current Trends. Working paper, Department of Applied Economics and Management, Cornell University, Ithaca, New York. March 2002.

APPENDIX A

SITE VISIT METHODOLOGY

The primary source of data for this report was a set of extended site visits to the eight universities. Most of the visits were conducted in fall 2005, with a pilot site visit to one university in April 2005 and a visit to the final university in January 2006. For each visit, three or four MPR researchers spent from two to four days on campus. The two main data collection activities conducted during the site visits were (1) interviews with stakeholders; and (2) focus groups with students, faculty, and, in some cases, community members. In addition, each site visit included a tour of the facilities used for the entrepreneurship programs. Some visits also included observations of advisory board meetings, entrepreneurship classes, or other activities.

In planning the visits, we sent a study contact person at each university a description of the topics we planned to cover and the types of people we hoped to include in the interviews and focus groups. We then discussed the specifics of the university's initiative with our contact person and developed a list of names of specific stakeholders we wanted to interview, as well as types of participants we wanted to include in focus groups. In most cases, our site contacts got in touch with each stakeholder and scheduled the interviews. Our site contacts also invited participants—particularly faculty and community members—to some of the focus groups. For other focus groups—including most of the student groups—our contacts sent us lists of those involved in the initiative, along with their contact information, and MPR staff invited them directly.

During the design phase of the study, we developed semistructured interview protocols to guide discussions with different types of stakeholders during this first round of site visits. After we determined the specific stakeholders and types of focus groups at each university, site visitors reviewed these protocols and customized them for each individual or group. This customization ensured that each interview and focus group included questions most relevant to the particular stakeholder or type of participants and that information on key issues was collected from more than one source. The rest of this appendix provides additional detail about the stakeholder interviews and focus groups we conducted during the site visits.

STAKEHOLDER INTERVIEWS

At each university, site visitors conducted interviews with key stakeholders who, collectively, could provide information on nearly every aspect of the entrepreneurship initiative. We defined the types of stakeholders and the topics to cover, and our contacts at each university recommended one or more specific people in each of the following categories:

- ***Campus Administrative Leader.*** This was typically a 30-minute interview with the president, provost, or both to address campus context, funding, initiative goals, and implementation challenges.
- ***Initiative Director/Staff.*** We typically had separate interviews with the initiative director, an assistant or associate director, and, sometimes, other key initiative staff. The interviews with the directors were the longest stakeholder interviews, lasting at least 90 minutes. They focused on context, program design, implementation, and financing.¹ We often obtained additional information from the initiative director or designated staff member, particularly regarding initiative structure and content, by email or telephone before and after the site visit.
- ***Community Representative.***² This person addressed the initiative's ties with both local and alumni communities. As a member of one of those communities, or as a faculty or staff member who acts as a liaison to those communities, this person addressed previous links between the campus and the community, initiative ties to the community, and aspects of implementation connected to outside communities. These interviews lasted about 60 minutes.
- ***Cross-Campus Stakeholder.*** To address the campus-wide reach of the entrepreneurship initiative, we interviewed a person who was involved in the initiative but was outside the school where the initiative was housed. These included department chairs, senior faculty members, and directors of school-specific components of the initiative. Topics addressed included campus-wide attitudes toward entrepreneurship before the initiative began, initiative goals, the initiative's connections with the rest of the campus, and the initiative's ability to attract faculty and students campus-wide. These interviews lasted about 60 minutes.

¹ We had included "program financing expert" in our original list of stakeholder types. In practice, however, this role was typically filled by the program director or other key staff member, so a separate stakeholder interview was not necessary.

² At some universities, community representatives were included in focus groups instead of, or in addition to, stakeholder interviews.

- **Senior Faculty, Senior Staff, or Department Head/Dean.** This person was selected for his or her strong institutional knowledge. The interviews addressed campus context, the general perception of the initiative on campus, and the initiative's sustainability. This person could be a faculty member, administrator, or experienced staff person such as an assistant to a dean or department head. These interviews lasted about 60 minutes.

We conducted between 7 and 17 stakeholder interviews at each university, with an average of 11. Our goal was to interview at least one stakeholder from each category. In many cases, however, our university contacts recommended we meet with more than one person in a single category. In some of these cases, two or three people from one category were interviewed together. The stakeholder interviews ranged from 30 minutes to two hours, depending on the depth of the stakeholder's involvement in the initiative and the number of people in the interview. Most stakeholders consented to audiotaping their interviews. However, except for the initiative director and the university chancellor or president, we informed stakeholders that they would not be identified.

FOCUS GROUPS

Focus groups of students, faculty, and, sometimes, community members were conducted at each university. These group discussions allowed site visitors to learn about the experiences of similar types of program participants. While site visitors asked general questions to guide the conversations, interactions between participants were encouraged. With participants' permission, we audiotaped the group discussions. To foster a free exchange of ideas, however, we promised confidentiality to focus group participants and do not identify them in any report of findings.

Student Focus Groups

The student focus groups generated feedback from students on their reasons for participating in the initiative, which of its aspects they find most interesting and useful, and suggestions they have to attract more students or otherwise improve the initiative. The focus groups at each school included students who participate either in curricular or co-curricular aspects of the entrepreneurship initiative. We tried to recruit students who represented as wide a cross-section of program participants as possible. In some cases, we held separate groups for graduate students or for those who had participated in a specific activity. We held two student focus groups at most universities, with additional groups at two universities.

Each focus group contained from 2 to 11 students, depending primarily on their availability, with an average of about 7 participants. The groups lasted between one and three hours, including time for refreshments. We also paid each student \$25 for participating.

Faculty and Community Focus Groups

We conducted between one and five faculty and community focus groups at each university, depending on the number and nature of the faculty included in the initiative. The faculty focus groups provided faculty views of several issues, including their reasons for participating in the initiative, the challenges they faced so far, and their suggestions for ways to improve the initiative. These focus groups included faculty who teach courses on entrepreneurship or are otherwise involved with the university's entrepreneurship initiative. In some cases, we had separate focus groups for faculty participating in different ways, such as serving on the initiative's steering committee, teaching entrepreneurship courses, or attending lectures. At one decentralized university, we conducted separate focus groups with faculty from different schools. At two universities with strong community involvement, we had special focus groups for adjunct faculty and community members. Community focus groups provided information on preexisting links between the campus and the community, ties between the new initiative and the community, and aspects of implementation related to outside communities.

Each focus group included between 3 and 10 faculty and community members, with an average of 5 participants. Faculty and community focus groups lasted between 90 minutes and three hours, and most—particularly the longer ones—took place over lunch.

APPENDIX B

FACULTY SURVEY METHODOLOGY

For this report, we collected data pertaining to faculty awareness, involvement, and attitudes toward entrepreneurship in part through a survey of faculty at KCI universities. We fielded the faculty survey in seven universities in spring 2006.¹ Here, we discuss the design, sample selection, and survey methodology.

INSTRUMENT DESIGN AND PRETESTING

The faculty survey was designed to collect data that would supplement the qualitative information collected during the KCI site visits. During these site visits, we conducted focus groups with faculty involved in the entrepreneurship initiative. The faculty survey, in contrast, targeted the broader universe of faculty at the KCI universities. The survey included questions related to faculty member awareness, interest, and involvement in the entrepreneurship initiative. The survey was designed to be brief—about five minutes long—and to be administered by telephone. We pretested the questionnaire with five faculty members from the College of Charleston in early April 2006. After pretesting, we made revisions to clarify a few questions and response categories that some faculty found confusing during the pretest. The final faculty survey instrument is included at the end of this appendix as Exhibit B.1.

SAMPLE SELECTION

Each university provided MPR with a list of all tenured and tenure-track faculty from across all the university's schools.² The lists contained the faculty member's name, tenure status (tenured or on tenure track), telephone number, and campus address. Some lists also included such fields as gender, age or date of birth, and race or ethnicity. We obtained missing telephone numbers and campus addresses from the university's online directory.

¹ We are surveying faculty at the University of Rochester in fall 2006; therefore, their results are not included in this report.

² Two universities did not wish to give us the complete list of faculty, so we provided the university with our allocation requirements and they drew the sample for us.

From the faculty lists, we selected a sample of 100 faculty members from each university. Because the school of arts and sciences is typically the largest school in the university and is often a key partner in cross-campus entrepreneurship initiatives, we wanted to ensure that arts and sciences faculty were well represented. Thus, we selected at least 40 percent of the sample at each university from the arts and sciences faculty. Reaching the 40 percent target, however, required oversampling arts and sciences faculty at most universities. In four of the seven universities surveyed, arts and sciences faculty represented 40 percent of the sample; in the other three universities, arts and sciences faculty represented from 50 to 70 percent of the sample. Smaller proportions of the sample were allocated to each of the other schools in each university, with the remaining sample allocated roughly in proportion to the number of faculty in each school.³

DATA COLLECTION METHODOLOGY

We fielded the faculty survey in seven of the eight universities between mid-April and early June 2006. All sampled faculty members received an advance letter, endorsed by their university's president, chancellor, or provost, encouraging their participation in the study. Universities handled the advance letters in several ways. Most universities provided MPR with their letterhead and electronic signature. In these cases, we printed, assembled, and mailed the letters. Other universities sent the advance letters directly to their faculty members. One university preferred having the letter on MPR letterhead, signed by Geraldine Mooney, the MPR project director. The advance letter mailings were staggered by university because we received their faculty lists at different times.

Approximately three days after mailing the advance letter, MPR interviewers trained in telephone survey administration and refusal conversion techniques began calling faculty members to complete the questionnaire by telephone. Interviewers made several attempts to reach faculty members in their offices, calling at different times of day. If interviewers could not reach the faculty member after three to five attempts, they left a message on that person's answering machine. Interviewers sent email messages to faculty members when the faculty member's voice mail message indicated to do so. In both cases, interviewers left a toll-free number for faculty to call to complete the interview at their convenience.

Table B.1 outlines the final disposition and response rates. With an overall refusal rate of less than five percent, making contact with faculty members helped determine the final response rate far more than refusals did. Given that the data from this survey were intended to supplement the site visit data, and not intended to be representative of the faculty overall, our target response rate was 50 percent. The response rate for the faculty survey was 53 percent overall, ranging from 48 to 55 percent at individual universities. After we reached the target rate of 50 percent at a university, interviewers shifted their focus to faculty at other sites. The field period for the survey was less than eight weeks overall, and as short as five

³ In two universities where medical or allied health schools were located on a separate campus and not involved in entrepreneurship activities, we excluded these schools from the sample. We reasoned that, because these schools have large faculties, including them would disproportionately skew the sample.

weeks at some universities, due to the staggered start dates. We did not provide incentives to the faculty members for completing the survey.

Table B.1. Final Disposition and Response Rates

	Number of Sample Members
Final Disposition	
Completed interview	352
Partially completed interview	1
Refusal	32
Ineligible ^a	30
Non-contact	285
Total	700
Response Rate ^b	52.7%

^aCases were considered ineligible if the faculty were (1) unavailable during the time the survey was being fielded, (2) no longer at the university, or (3) not tenured or on tenure-track. Ineligible cases were subtracted from the denominator in the response rate calculation.

^bResponse rate was calculated using the following formula: (Completed Interview + Partially Completed Interview)/(Total - Ineligible).

After interviewers reached faculty, they read survey questions aloud and recorded faculty members' responses on paper questionnaires. Interviews lasted between five and seven minutes. When an interview was completed, questionnaire responses were entered into a database, then converted into a SAS data file for analysis.

Exhibit B.1. Survey instrument

Exhibit B.1 begins on page B.4.

KCI FACULTY SURVEY

ID # _____

Date: ____/____/20____
Month Day Year

INT. _____

Start Time: ____:____ AM/PM

End Time: ____:____ AM/PM

SCREENER

S1. I have a couple of preliminary questions.
 What is your faculty rank?

READ IF NECESSARY:

PROBE: IF 'PROFESSOR', SAY: Is that full professor, associate professor, assistant professor, or something else?

- FULL PROFESSOR..... 1
- ASSOCIATE PROFESSOR 2
- ASSISTANT PROFESSOR..... 3
- ADJUNCT FACULTY 4
- INSTRUCTOR OR LECTURER..... 5
- OTHER (Please Specify) 6

S2. What is your tenure status at [UNIVERSITY]?

READ IF NECESSARY:

- TENURED 1
- ON TENURE TRACK 2
- BUT NOT TENURED 2
- NOT ON TENURE TRACK 3 → GO TO END2

END2. Those are all the questions I have for you. We are interviewing tenured and tenure-track faculty for this survey and I appreciate you taking the time to talk with me today. Good-bye.

A1. Next, I will ask you some questions about [UNIVERSITY]'s entrepreneurship initiatives. How aware would you say you are of the entrepreneurship initiatives or activities? Would you say you are. . .

MARK ONE

- very aware,..... 1
- somewhat aware, or..... 2
- unaware?..... 3
- DON'T KNOW d

A2. In your opinion, how aware are the faculty in your department of the entrepreneurship initiative? Would you say they are...

PROBE: How aware are most faculty? How aware are the faculty in general?

MARK ONE

- Very aware.....1
- Somewhat aware, or.....2
- Unaware?.....3
- DON'T KNOW.....d

A3. Regardless of whether or not entrepreneurship initiatives exist at [UNIVERSITY], among the faculty in your department, what do you feel is the current level of interest in incorporating entrepreneurship themes into your discipline? Would you say there is...

MARK ONE

- no interest1
- some interest, or2
- a lot of interest?3
- DON'T KNOW.....d

A4. Among the students in your department who seem aware of entrepreneurship, would you say there is...

MARK ONE

- no interest,1
- some interest, or2
- a lot of interest in entrepreneurship topics and themes?3
- NO (FEW) STUDENTS ARE AWARE0
- DON'T KNOWd

A4INT. INTERVIEWER: DOES A1 =

- very aware,1
- somewhat aware, or2
- unaware?3
- DON'T KNOWd

} → GO TO A6

INTERVIEWER: CODE REASONS BELOW. CIRCLE 'M' NEXT TO THE MAIN REASON.

- M 1 NO TIME / DOESN'T FIT IN MY SCHEDULE
- M 2 NO RELEASE TIME / DEPT WON'T REDUCE LOAD
- M 3 INSUFFICIENT FUNDS TO DEVELOP COURSE
- M 4 LITTLE DEPARTMENTAL SUPPORT / FROWNED UPON BY DEPT
- M 5 NO INCENTIVES TO DO THIS
- M 6 TOO MANY BUREAUCRATIC DETAILS / TOO MANY HOOPS TO JUMP THROUGH
- M 7 INTERESTED BUT NOT ENOUGH OF A PRIORITY
- M 8 DOESN'T FIT WITH MY DISCIPLINE / INTERESTS
- M 9 WON'T ADVANCE MY CAREER
- M 10 DON'T LIKE PROGRAM / DOESN'T FIT WITH MY VISION / NO PLACE FOR ME
- M 11 DON'T THINK ENTREPRENEURSHIP SHOULD BE PART OF CURRICULUM
- M 12 NOT AWARE OF ANY OPPORTUNITIES
- M 13 ALREADY VERY INVOLVED IN ENTRE. ACTIVITIES / CAN'T POSSIBLY DO MORE
- M 14 ALREADY INVOLVED IN ENTRE. ACTIVITIES OFF-CAMPUS / HAVE OWN BUSINESS
- M 15 OTHER

A8. Do you see a place for entrepreneurship themes in the courses that you teach?

- YES..... 1
- NO 0
- DOES NOT TEACH COURSES..... 2
- DON'T KNOW..... d

A9. In your opinion, how important is it that entrepreneurship concepts and skills be offered as part of a college education? Would you say that it's. . .

MARK ONE

- very important, 1
- somewhat important, 2
- not too important, or..... 3
- not at all important? 4
- DON'T KNOW..... d

Finally, a few background questions about you.

A10. Have you ever started a business?

PROBE: Either by yourself or with a partner or partners.

- YES..... 1
- NO 0

A11a. What is your school or college at [UNIVERSITY]?

School: _____

A11b. What is your department?

Department: _____

