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AUTHOR Brawer, Florence B.  
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## ABSTRACT

This digest reviews entrepreneurship activities among university and community college faculty and administrators, citing a number of studies that examine corporate-university linkages. These studies note that some faculty act as consultants to organizations, thus providing an avenue for personal interaction between industry and academe, or engage in research that leads to commercialization of a product, which in turn results in formal research arrangements between the industrial partner and faculty members. Many patents held by business corporations, for example, are the result of work performed in university laboratories. Community colleges also participate in entrepreneurial activities by teaching students who may eventually create their own businesses. The major difference between academic researchers and industrial entrepreneurs relates to differences in values. While academic work is done within a relatively narrow disciplinary focus, entrepreneurial activities involve linkages between resources and opportunities and require technical, managerial, and interpersonal competencies. Such value differences keep many faculty from participating in entrepreneurial activities, even though these activities may benefit their institutions and society at large. (Contains 8 references.) (JM)

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4801 Rockhill Road  
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(888) 423-5233

# Digest

September 10, 1998

DIGEST Number 98-3

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## Academic Entrepreneurship in Higher Education

By Florence B. Brawer

Principles of entrepreneurship can be seen not only in college student preparation programs but also in faculty and administrator activities and in relationships with external constituencies.

This paper deals with entrepreneurship activities that are instigated primarily by faculty members and administrators in both universities and community colleges. While creating revenue may be an important objective of these efforts, it is not always the primary reason for entrepreneurial activities. Here we shall discuss the role of faculty as it operates in some sectors of higher education, and the relationship between corporations and academic institutions that are based on research and entrepreneurial activities.

### Universities

Corporate-university linkages are hardly a new phenomenon. University research has long provided businesses with information about scientific developments. Indeed, many patents held by business corporations were born in the departments or laboratories of some universities. Buchbinder (1993) argues that the modern university is under economic pressure to produce and transfer knowledge. Because this shift to a market orientation will alter the form in which knowledge is disseminated, the university environment may tend away from the autonomy of the individual

practitioners and toward centralized management.

On the other hand, smaller institutions must focus on excellence in undergraduate education and on "applied" rather than on "heavy" research. Comparing small Canadian universities to liberal arts colleges in the United States, Belanger (1989) suggests that these institutions should hire faculty who are interested in business and should concentrate or specialize in limited types of research that enable them to be important agents of socio-economic regional changes. Since there are basic cultural and value differences between higher education and the private sector, attention must be paid to a clear understanding of the concepts and activities of entrepreneurship. Future policy development and strategy planning will benefit higher education in both the academic and private sectors.

Focusing on research-based practices rather than conceptual issues, Louis, Blumenthal, Gluck, and Stoto (1989) examine academic entrepreneurship, defined as the attempt to improve individual or institutional profit and influence through the development and marketing of new research-based products. The increased numbers of students championing increased entrepreneurship in universities is due to the current beliefs that entrepreneurship contributes to the

rapid movement of scientific ideas into commercial areas, and thus, aids the national economy and society. Scientific efforts are revitalized through new sources of research faculty, which in turn contribute to the scientific financial base through royalties. (Blumenthal et al. as cited in Louis et al., 1989; Peck 1984).

Bird and Allen (1989) discuss entrepreneurship activities among faculty members as one of several approaches to commercializing research in universities. Data collected from their study at the University of North Carolina and North Carolina State University reveal entrepreneurial behavior among faculty members and institutional level concerns. Discussion of the survey findings in this report focuses on value differences between academic and industrial roles and on responses to such questions as the role of faculty in commercially oriented ventures, and assumption of responsibility for the economic development of local economic regions.

As an extension of their research interests, individual faculty members contribute to new venture development in a number of ways. They act as consultants to organizations, providing a direct avenue for personal interactions between industry and academe. Consulting also often results in formal research arrangements between industrial partners and faculty, and may

gradually ease the faculty into businesses. The survey cited here found that 23% of the management faculty who were interested in entrepreneurship were involved in business and 30% had consulted for new ventures. About 13% of the faculty reported that their research activities had led them to commercialize a product or service. At the same time, the survey results suggest that few faculty are actually involved in entrepreneurial activities related to their research (Bird & Allen, 1989).

### Community Colleges

Involvement in activities related to entrepreneurship engages community colleges as well as universities, generally through the teaching and preparation of students who will eventually create their own businesses. Elford and Hemstreet (1996) discuss innovative educational administrators and faculty who work as entrepreneurs within the institution, stating the necessity of community colleges having a structural and administrative framework in order to support a market orientation that may eventually reduce dependence on government funding. They point to several institutions that implement entrepreneurial activities, for example, an intense 10-day accounting training program at Grant MacEwan Community College (Canada) and a project at Red Deer College that provides reference library service to local businesses.

Clayton (1989) takes a different tack in his discussion of entrepreneurial education in community colleges. He cites four objectives of such education: increasing awareness of entrepreneurship as a career choice; improving students' prospects for business survival through a variety of applied and

conceptual courses; informing all students of the nature and importance of entrepreneurship as well as of its risks and potential difficulties; and offering a curriculum that is aimed specifically at developing entrepreneurial behavior. His remarks suggest many of the concepts and activities that have been associated with the three Jump Start Programs initiated and funded by the E.M. Kauffman Foundation's Center for Entrepreneurial Leadership, Inc.

Whether rooted in universities, community colleges, corporations, or small businesses, entrepreneurship may involve concepts, activities, products, and/or institutional structure. In all cases, however, it falls back on people; whether they be administrators, faculty, students or corporate players. In the case of higher education, where appropriations do not usually meet the rise in costs, department chairs and deans need to combine traditional leadership qualities with an entrepreneurial spirit (Barnes, 1996). They must use this same spirit to augment decreasing state funding, and they should stimulate their faculties to demonstrate resourcefulness and risk-taking.

The major differences between academic research and entrepreneurs in industry relate to differences in values. The academic's work involves research and teaching in a relatively narrow disciplinary focus together with services to the university. The low level of entrepreneurial activities among faculty has to do with values for their work and values for their lifestyle. On the other hand, work for the entrepreneurs involves linkages between resources and opportunities and requires technical, managerial, and interpersonal competencies. Knowledge for this is embedded

in a finished marketable product or service. At the same time, some of the literature does suggest that a number of faculty are ready to commercialize their research by starting a corporate firm.

Universities and colleges must encourage these activities and not see them as conflicts of interest. They may very well benefit most, higher education institutions as well as society at large.

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