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Global Preparedness and Human Resources

College and Corporate Perspectives

T. K. Bikson, S. A. Law

Institute on Education and Training

The research described in this report was sponsored by the College Placement Council Foundation and by RAND's Institute on Education and Training.

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T. K. Bikson, S. A. Law

Supported by the
College Placement Council Foundation

Institute on Education and Training

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Preface

This is the final report of a RAND project titled "Global Preparedness and Human Resources: College and Corporate Perspectives." The project explored the ways in which US corporations and institutions of higher education understand globalism, their perceptions of its human resource implications, their responses to these implications, and ways in which they might respond more effectively.

The project was sponsored by the College Placement Council (CPC) Foundation, a 501(c)(3) tax-exempt research arm of the College Placement Council, Inc. Established in 1956, CPC Inc. is the national association for professionals engaged in the career planning, placement, and recruitment of college graduates; as such, it serves as the link between higher education and employers. In this capacity, CPC Inc. represents the professional interests of two constituencies: 3,500 career planning and placement professionals at four-year and two-year colleges and universities, and 4,000 human resource professionals representing employing organizations in business, industry, and government. As part of its mission, the CPC Foundation identifies, supports, and disseminates research in key areas of concern to these constituents.

The research was conducted in the Education and Human Resources program of RAND's Domestic Research Division. Supplemental funding for the research was provided by the RAND Institute on Education and Training.

The research reported will be of interest to corporations that are attempting to adjust their human resource policies to adapt to economic globalism; to academic decisionmakers and faculty who are attempting to adjust curricula; and to students who are preparing themselves to compete in a global workplace. Implications for the role of placement professionals are also highlighted and directions for follow-on research are suggested.

Executive Summary

Developed nations are moving rapidly toward a more global, interlinked economy, and this trend is expected to result in profound organizational and social changes. However, the human resource implications of globalism—what it means for workers, their education and training, and their career paths—have received relatively little attention. This study is a first step in providing such information. It was carried out in response to a request for research by the College Placement Council (CPC) Foundation. CPC is the national association for professionals engaged in career planning, placement, and recruitment of college graduates, a constituency that is centrally involved in developing an effective US workforce for the global economy.

Objectives

This research explores the human resource implications of the emerging economic globalism. Specifically, it addresses the following questions:

- How is globalism understood by corporations and colleges in the United States?
- What are the perceived human resource implications of globalism? In particular, what characteristics will be needed by professionals to perform successfully in the new world economy?
- What are corporations and colleges doing today to meet these human resource needs? How successful are they?
- What, if anything, should they be doing differently to produce a professional workforce that is competitive globally?

Additionally, the study investigates whether individuals in different regions, different types of institutions, and different organizational roles hold similar views about these issues.

Study Approach

A case-study research approach was employed for observing and analyzing ongoing processes in real-world contexts. The study sites, 16 corporate and 16

academic institutions, were distributed evenly among four major urban areas in distinct regions of the United States (see Table S.1). The corporate sites included manufacturing, construction, and business and technical service firms. All were multinational or had international business strategies, and all recruited professional employees from college campuses. The academic sites included both public and private colleges and universities, all of which had mission statements or programs that acknowledged a concern with preparing graduates to participate in a global economy, and all of which offered job placement services.

Two kinds of information-gathering procedures were conducted at each site: individual interviews and group discussions. The individual interviews were semi-structured and followed a common protocol. Interviewees at corporate sites included senior members of management, heads of personnel or human resources departments, and department directors. Academic interviewees included senior decisionmakers, directors of the career placement service, and senior faculty members. The group discussions were conducted with recently hired, entry-level corporate professionals and graduating students seeking professional jobs. These participants were grouped because, although they

Table S.1

Study Sites in Four Major Urban Areas

Corporate Sites	Academic Sites
Los Angeles area	
Fluor Daniel, Inc.	University of California, Los Angeles
Warner Bros. Inc.	University of Southern California
Toyota Motor Sales U.S.A., Inc.	California State University, Long Beach
Deloitte & Touche	Loyola Marymount University
New York area	
Booz Allen & Hamilton, Inc.	State University of New York, Stony Brook
AT&T	New York University
General Electrical Distribution and Control	The City College, City University of New York
Hoechst Celanese Corporation	Columbia University
Chicago area	
Motorola Inc.	University of Illinois, Champaign-Urbana
Household International, Inc.	University of Chicago
UARCO	Northern Illinois University
Baxter Healthcare Corporation	DePaul University
Houston/Dallas area	
Schlumberger Limited	University of Texas at Austin
Halliburton Geophysical Services	Southern Methodist University
Mobil Corporation	University of Houston
Oil Company XYZ	Texas Christian University

lacked sufficient knowledge to respond to the full protocol, they were in a position to be directly affected by plans for developing a more internationally aware workforce—if such plans were in fact being implemented.

All participants were asked to complete a short questionnaire which required them to rate on a five-point scale the importance of various factors in successful job performance in a globally oriented firm. The questionnaire responses were used to help focus subsequent interviews. A total of approximately 350 people participated, divided about evenly between corporate and academic sites.

The results of our study should interest a variety of individuals in corporate and academic settings. On the corporate side, there are important conclusions and implications for the full spectrum of human resource management concerns, including recruiting, hiring, and staff development. On the academic side, there are important conclusions and implications for administrators and faculty (especially those involved in curriculum and program development) and for students.

Limitations of the Study

The perceptions and behaviors observed in the study sample may not generalize to all US corporations and colleges. The sites were selected because they appeared to be aware of and actively responding to an increasingly global economic environment and are thus likely to be on the leading edge regarding issues of globalism. The rich and detailed information they provided should therefore be very useful to other institutions.

It is important to distinguish carefully between perceptions and reported behaviors, on the one hand, and actual conditions and behaviors, on the other. No attempt was made in this study to establish the validity of respondents' answers. Anecdotal evidence suggested that some responses, though based on recent experience, were in fact inaccurate and outdated. Some corporations and colleges appear to be moving very quickly to meet the challenges of a global economy, and their ongoing efforts are undoubtedly not fully reflected in the data reported here.

Findings

Factors Contributing to Successful Work Performance

Respondents' ratings of the importance of factors thought to contribute to successful work performance in a globally oriented firm are shown in Figure S.1.

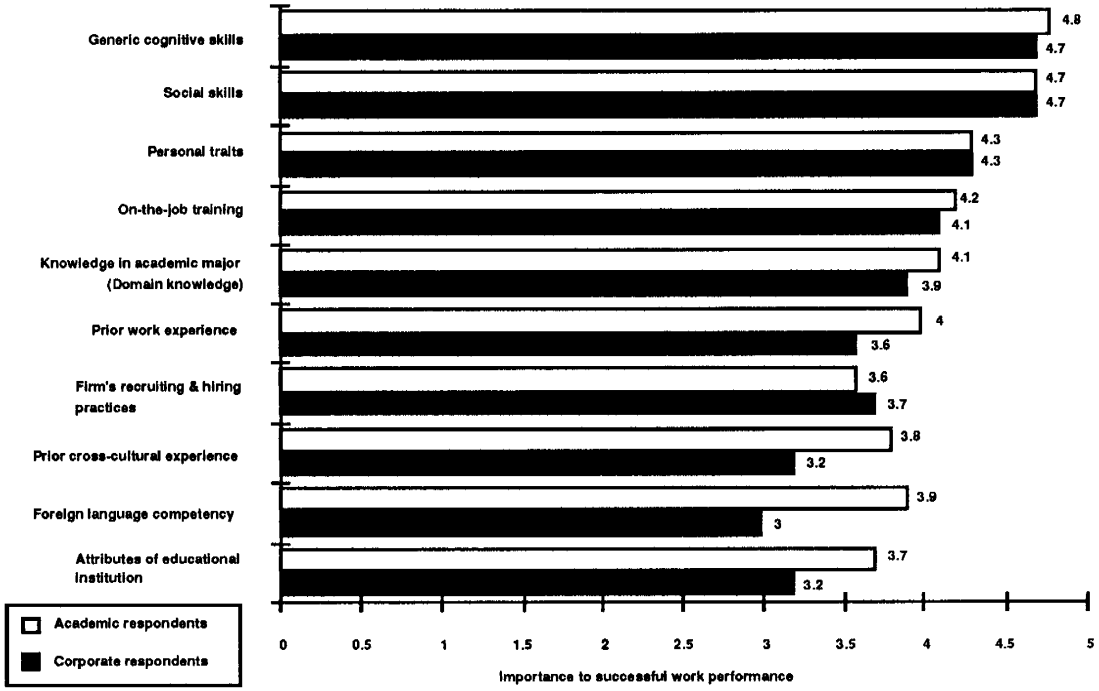

Figure S.1—Factors Contributing to Successful Work Performance

Eight factors represent characteristics of individual employees, whereas two ("on-the-job training" and "attributes of educational institution") are institutional factors.

Corporate and academic respondents generally agreed on the relative ranking of the ten factors, although academic ratings were generally higher. A number of key findings stand out:

- Knowledge in one's academic major, or domain knowledge, ranked only fifth among the ten factors.
- The three highest-rated factors (generic cognitive skills, social skills, and personal traits) are not generally associated with any specific training.
- Nonacademic training and experience (on-the-job experience and prior work experience) are as highly rated as academic knowledge.
- Corporate and academic respondents disagree significantly on the importance of prior crosscultural experience and foreign language competency, two factors generally accepted as indicators of overall crosscultural competence.

No significant regional differences were found. Neither were there many significant differences among the responses of individuals at different types of corporations and colleges. However, manufacturing firms rated knowledge in academic major higher than did service firms, and private schools rated attributes of educational institution higher than did public ones.

Corporate Perspectives on Globalism

The corporate respondents viewed globalism in two senses, conceptual and operational. Globalism in a conceptual sense refers to a revolutionary way of understanding the structure of the world economy and the position of US firms in it; globalism in an operational sense refers to new ways of doing business designed to increase a firm's competitiveness in an increasingly interlinked world economy.

Globalism in the conceptual sense is characterized by four themes:

- Economic activity is no longer perceived as being tied to a specific location (as in a national model) or even many locations (as in a multinational model); rather, it is seen as distributed (international or "global").
- Economic activity is highly adaptive to local conditions: goods and services are tailored to customers' needs; communication with customers, suppliers, and distributors everywhere is rapid and direct; and collaborative ventures are undertaken with other organizations at a distance.
- The need for fast, flexible responses to opportunities and challenges entails a host of operational changes.
- Individual employees must perform effectively to meet wide-ranging, quickly changing demands.

Globalism in the operational sense is characterized by three kinds of activities:

- Large-scale restructuring by firms to move away from location as a major principle of organization.
- Expansion of the corporate knowledge base to permit worldwide business activities.
- Enhancement of competitiveness through improvements in speed, quality, and customer satisfaction.

Organizational and operational changes appear to succeed best when they are guided by an institutional understanding of globalism in the conceptual sense.

Corporate Perceptions of Human Resource Implications

Our interviews and discussions with corporate participants explored the consequences of a global business strategy for the kinds of professional employees a firm hopes to hire. Four categories of human resources needs were suggested by the results of our research.

- **Domain knowledge.** The need for knowledge in specific subject-matter areas is intensifying as firms face stronger competition. Colleges in the United States are currently producing graduates with strong domain knowledge, but corporations are concerned about the ability of those colleges to continue to meet even higher standards as their resources become increasingly limited and entering students show signs of being less prepared.
- **Cognitive, social, and personal skills.** Problemsolving ability, decisionmaking, and knowing "how to learn" are all valued generic cognitive skills. Social skills include the ability to work effectively in groups with colleagues of diverse backgrounds (both cultural and professional) and the ability to communicate effectively both in writing and in speech. Frequently cited desired personal traits are flexibility and adaptability, openness to new ideas and practices, empathy with others' perspectives, commitment to quality work, and innovativeness. Corporate participants do not believe that colleges focus on developing these skills and qualities.
- **Prior work experience and on-the-job training.** Corporations value job candidates who have successfully demonstrated their domain knowledge and their generic skills and traits in work settings. Corporate participants do not believe that colleges generally encourage students to gain work experience relevant to their professional goals (even though some academic programs include internships).
- **Crosscultural competence.** This is the critical new human resource requirement created by globalism. It involves some domain knowledge (in relation to other cultures) as well as social skills and personal traits that enhance crosscultural communication and cooperation. Corporations are skeptical about the ability of colleges to foster such competence through their foreign language departments (many of which focus on literary criticism) or even study-abroad programs (which may in fact insulate students from fully experiencing the host country culture).

Corporate Efforts to Meet Human Resource Needs

Corporate respondents cited several new strategies for meeting their human resource needs in a more global economy, as well as some traditional strategies that have been updated:

- **Looking beyond the US job market.** Corporations that want entry-level candidates with crosscultural competence frequently seek non-Americans. Some corporations interview foreign students attending US schools, and some employ international search firms that specialize in filling entry-level positions.
- **Sending new signals to schools.** Corporations are also signaling their interest in crosscultural competence through job descriptions, recruiting processes, and hiring procedures.
- **In-house training and development.** Corporations rely on in-house training and development activities to assess and cultivate their employees' aptitudes for performing effectively in an international workforce.
- **Updated models for international careers.** Professional careers are increasingly viewed as potentially international, and corporations prefer to schedule initial globally oriented assignments early in the career path. Expecting to send more professionals abroad, corporations are also improving their relocation and repatriation activities.
- **Strengthening ties with academic institutions.** Corporations are working closely with colleges and universities to produce more globally oriented graduates. Firms are providing funds for curriculum development, faculty exchange programs, and student internships.

Corporate representatives offered several broad recommendations for meeting the human resource needs of a global economy. First, they suggested that corporations needed to do a much better job of treating their current employees "as assets rather than costs." Second, they felt that it was necessary for colleges to instill both generic skills and first-rate domain knowledge and that industry had a responsibility to provide innovative educational opportunities to encourage such training. Finally, they indicated that government's best role was simply to "level the playing field" for American and foreign corporations and their employees so that everyone could compete fairly. A common complaint was that the United States is the only country that taxes monies its citizens earn abroad.

Academic Perspectives on Globalism

The academic participants, like their corporate counterparts, understood globalism in both conceptual and operational senses. Colleges thought that their students needed to acquire a new way of perceiving the global economy and an understanding of the implications of globalization for their own careers.

College Perceptions of Human Resource Implications

- **Domain knowledge.** US colleges believe that they still lead the world in providing high-quality education. However, non-US citizens make up an increasing proportion of the student body, especially in technical departments, and in a global economy these students will compete with US citizens throughout their careers whether they remain in the United States upon graduation or not.
- **Cognitive, social, and personal skills.** College respondents acknowledged that employers increasingly value these generic skills and that colleges do only a fair job of imparting them. Improving college performance in this area will be difficult, requiring changes in curriculum, course design, teaching techniques, and assessment methods.
- **Prior work experience.** Although it is well understood that most students must work during their schooling, academic departments generally do not encourage students to work, nor do they help them locate jobs that will complement their schooling or contribute substantively to their careers. Internships are a promising solution, but they must include funding if they are to benefit most students.
- **Crosscultural competence.** College respondents expressed concern that US students are more insulated than students elsewhere and are less likely to acquire the knowledge, skills, and traits that enhance crosscultural interaction. Colleges do not seem to be aware that US corporations suspect the efficacy of traditional academic foreign language departments and study abroad programs in developing crosscultural competence.

College Efforts to Meet Human Resource Needs

College participants identified many changes that are needed to prepare students adequately to compete in a global workplace:

- **Curricular changes.** All the colleges had reviewed their curricula with the aim of better preparing students to function in a global economy. Some had added internationally relevant courses and new dual majors or minors; others had developed links with foreign colleges. Most agreed that pervasive changes were needed, but that such changes could not be accomplished by administrative mandate. Incentives and resources are needed to encourage faculty to change their courses and teaching.
- **Extracurricular changes.** Study-abroad programs are highly touted, but they are expensive and limited to few students. Many foreign students attend US colleges, but they are seldom used as resources to support development of crosscultural competence among US students.
- **Faculty development.** Colleges reported that they are seeking instructors with international expertise, but few of them are doing any hiring at all. However, they do encourage faculty exchanges and visits with foreign colleges.
- **Innovative cooperative ventures.** US colleges are developing many cooperative ventures to internationalize their teaching and research programs. In one program, schools in several countries share international resources and exchange students and faculty. Other programs link academia and industry. For example, some colleges provide foreign language training for industry employees, and some firms provide internships for college students.

Colleges sounded two themes regarding their efforts to address human resource needs for a global economy. First, they are constrained from acting by declining resources and competing challenges, particularly the increasing lack of preparation of entering students. Second, they want to develop better communication with industry and government regarding needs and expectations for entry-level professionals. Currently, colleges receive mixed signals from industry. Corporate representatives say they want crosscultural competence, but campus recruiters still look only for students with excellent domain knowledge.

Implications

The findings of this study have implications for many persons in both corporate and academic settings who are adapting organizational policies and practices—as well as their own individual actions—to meet the demands of a more global economy.

Corporations

The chief implication for corporations is that they must do a better job of developing their human resources if they are to compete successfully.

- Corporations should ensure that their human resource policies change appropriately to reflect their changing business strategies. Moreover, they should ensure that their recruiting, hiring, promotion, and staff development practices are consistent. If crosscultural expertise is really desired, it must be cultivated and rewarded. For example, repatriated employees must be recognized as resources who have acquired valuable experience.
- Corporations should help colleges to produce graduates with the knowledge and skills needed in a global economy by communicating with them more effectively, providing more resources, and engaging in more joint endeavors.

Colleges

Colleges face a stiff challenge in responding to the human resource demands of the new globalism. The necessary initiatives will require substantial new resources or radical reallocations of existing resources. Moreover, most of the work must be done by the faculty, a largely self-managing workforce. Nevertheless, this study identified some promising paths:

- Colleges should make better use of the cultural diversity already available in their student bodies and localities to cultivate global awareness and crosscultural competence.
- Colleges should provide faculty with incentives (and, if possible, with resources) to develop new courses or adapt existing courses to address globalism. Faculty currently receive strong signals that the only relevant performance criteria are publication records and teaching evaluations.
- Colleges should seek close relationships with corporations. Such ties will enable colleges to understand better the emerging human resource needs and to explore the feasibility of joint programs to help meet those needs.

Students

Students who intend to pursue careers in professions affected by globalism should strive to develop not only their domain knowledge but also their generic skills and crosscultural competence. These are multifaceted capabilities that must be cultivated in several ways:

- Students can improve their generic skills through group projects and through work experience during schooling. Those who work should try to gain job experience in positions that relate to their career goals. Paid internships, for example, are ideal.
- International domain knowledge can be gained through specific courses or by choosing relevant project and paper topics.
- Students who take foreign language courses should apply their knowledge in ways that contribute directly to their careers. For example, they should read current foreign newspapers and professional periodicals in addition to works of literature.
- Students should seek opportunities to interact with non-US citizens. Those who go abroad should not confine their association to other expatriate Americans. And those studying at schools in the United States should use the cultural diversity of their own campuses and localities to develop crosscultural competence.

The Role of Placement Professionals

Career planning, placement, and recruiting professionals play a special role in meeting the human resource demands of an increasingly global workplace. Because they work directly with both corporate and academic constituencies, they are in a unique position to foster effective communication between them. They can also identify opportunities, for both individuals and institutions, to develop effective responses to globalism.

Directions for Further Research

Many questions regarding globalism and its impact on human resource requirements remain unanswered. The following, in particular, should be addressed in the near term:

- In quantitative terms, how is globalism affecting the US economy? Can the effect be measured and monitored?
- How should apparent discrepancies between human resource practices and broader business strategies in US firms be interpreted? What incentives are there to invest in human resources rather than other resources?
- How much priority should colleges give to developing crosscultural competence in their students, given constrained resources and other competing demands?

- What institutional frameworks will best support collaboration between corporate and academic communities? What government initiatives, if any, are desirable?

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Most of all, we wish to thank the corporations and academic institutions that took part in the study. Their representatives—about 350 individuals in all—made time available to cooperate in the research, candidly sharing their knowledge and experience. We learned a great deal from these organizations.

Corporate	Academic
Fluor Daniel, Inc.	University of California, Los Angeles
Warner Bros. Inc.	University of Southern California
Toyota Motor Sales U.S.A., Inc.	California State University, Long Beach
Deloitte & Touche	Loyola Marymount University
Booz Allen & Hamilton, Inc.	State University of New York, Stony Brook

Corporate	Academic
AT&T	New York University
General Electrical Distribution and Control	The City College, City University of New York
Hoechst Celanese Corporation	Columbia University
Motorola Inc.	University of Illinois, Champaign-Urbana
Household International, Inc.	University of Chicago
UARCO	Northern Illinois University
Baxter Healthcare Corporation	DePaul University
Schlumberger Limited	University of Texas at Austin
Halliburton Geophysical Services	Southern Methodist University
Mobil Corporation	University of Houston
Oil Company XYZ[1]	Texas Christian University

[1]This firm preferred to remain anonymous.

1. Introduction

Creating a global workforce for the 21st century is becoming a critical issue for the career planning, placement, and recruitment of professionals in the United States today. Companies in the future will increasingly flourish, or fail, depending on how well their employees adapt to an internationalized economic environment. Institutions of higher learning must prepare their graduates to perform successfully in the global marketplace. But in spite of the widely recognized importance of globalism, the human resource implications have not been systematically studied.

The study reported here is a first step in that direction. It was carried out in response to a request for research by the College Placement Council (CPC) Foundation, a research arm of CPC, Inc. CPC, Inc. is dedicated to the development of the career planning, placement, and recruitment of college graduates through research and education. As part of its mission, the CPC Foundation identifies, supports, and disseminates research in key areas of concern.

Toward a Global Economy

Developed nations are clearly moving rapidly toward a global, interlinked economy. The US Department of Commerce's 1990 *Industrial Outlook*, for example, warns that US multinational corporations can expect to "face stronger competition from foreign multinationals in international markets than ever before." The report provides data showing that although the United States remained the single largest source of direct investment capital, by the end of 1988 the foreign direct investment position in the United States for the first time exceeded the US direct investment position abroad.

Import-export data similarly underscore the vital role of global activity. The UN's 1991 *World Economic Survey* noted that for the sixth consecutive year—despite the worldwide recession—the increase in world trade exceeded the growth of world output. The survey concludes that trade is, and will probably continue to be, "one of the more dynamic elements in the world economy." This conclusion applies directly to the United States, where trade currently represents about 25 percent of the economy. Trade has played an important role in sustaining the economy over the past several slow-growth years. For instance, in

the first three quarters of 1990, export growth accounted for about 70 percent of GNP growth. And, based on industry assessments, "exports in 1991 will again be an important force in fueling domestic economic growth."[1]

The trend toward a globally linked economy is also evident in the corporate lending arena. Whereas the US commercial loan market was formerly dominated by US banks, Federal Reserve analyses show that in 1991, foreign banks' share of that market had reached a surprisingly high 45 percent.[2] Moreover, these patterns of investment, trade, and lending probably underrepresent the real extent of internationalization. That is, they do not fully reflect the increased importance of outsourcing, joint research or marketing ventures, licensing agreements, regional trade agreements, exchange rates, and the like, in the activities and plans of US firms.

Less visible, but equally profound, organizational and social changes are expected to accompany these economic trends. Kenichi Ohmae, managing director of the Tokyo office of consultants McKinsey & Company, contends that "a global corporation today is fundamentally different from the colonial-style multinationals of the Sixties and Seventies."[3] That style—headquarters-oriented, highly centralized, and unresponsive to the cultures and needs of other countries—cannot compete effectively with more flexible, locally adaptive approaches to doing global business.

Corporate strategies for responding to an increasingly internationalized and dynamic environment have been the subject of widespread attention, both in popular media and in the trade press. Much less attention has been addressed to the human resource implications. What kinds of managers and professionals will perform successfully in a global economy? What should higher educational institutions be doing to prepare their graduates for effective participation in such an environment? How can corporations improve their ability to find, hire, and develop a workforce that can cope with international as well as domestic competitive pressures? In these areas there is little systematic information.

Study Objectives

The research reported here was undertaken to address such questions. An exploratory effort, its overall goal was to learn more about the human resource

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[1] US Department of Commerce, 1991.

[2] *Los Angeles Times*, June 16, 1992.

[3] Ohmae, 1990.

requirements for success in an internationalized economic environment. More specifically, four key questions defined the study's objectives.

- What does globalism mean to corporations and colleges in the United States?
- What are the human resource implications of globalism as it is currently construed?
- What are corporations and colleges doing now to meet these human resource needs, and how successful do they think they are?
- What, if anything, should colleges and corporations do differently to produce a competent global workforce?

The study also sought to determine the extent to which stakeholders in different regions, institution types, and organizational roles hold common views about human resource needs and US capabilities to meet them.

The research focused on the skills needed by persons entering the professional workforce after completing a baccalaureate degree program; these are the occupations most affected by a firm's pursuit of a global business strategy. Census data for 1988 (the most recent data available) indicate that about 25 percent of the US civilian workforce hold professional jobs[4] and that this group is among the four broad occupation groups projected for highest growth between now and the year 2000.[5]

These professionals represent about three-quarters of the baccalaureate graduates of US colleges. In 1989, 72 percent of the entering first-year students at four-year colleges and universities planned to major in fields associated with professional employment. Of this 72 percent, 25 percent were enrolled in business majors; 15 percent in engineering, computer science, or other technical majors; 16 percent in the other sciences; and 16 percent in majors leading to other professional fields, such as communications.[6]

Study Approach

The research is based on a multisite, replicated case design that has guided successful RAND research in varied educational and organizational settings.[7] Case study is a particularly appropriate method for examining and interpreting

[4]US Bureau of the Census, 1991.
[5]US Department of Labor, 1991.
[6]US Bureau of the Census, 1991.
[7]Bikson, Eveland, and Stasz, 1990; Bikson, Stasz, and Mankin, 1985; Stasz et al., 1991.

ongoing processes in real-world contexts—especially when the processes to be studied (e.g., approaches to training or recruitment) are not sharply separable from their contexts (other educational or organizational activities) and when the variables of interest are likely to outnumber the potential units of study.[8]

The cases chosen for this research can be regarded as replications because similar sets of criteria were used to select participating schools and firms, and because common data gathering procedures were employed across the sites. Within these constraints, however, participating sites varied widely. For instance, organizational settings included manufacturing, construction, and both business and professional service firms; educational settings included both private and public institutions, some structured as universities and others as colleges.[9] Geographic diversity was also designed into the study. This approach captured a range of ways in which colleges and corporations are defining and responding to the human resource needs of a global economy.

Sites and Participants

The study sample was chosen in stages, with geographic regions selected first; within regions, specific organizations were recruited; and within organizations, particular role incumbents were selected. Four major urban areas (Los Angeles, New York, Chicago, and Houston/Dallas) were chosen to ensure an adequate number of academic and corporate sites for drawing the desired sample. Further, these regions were expected to reflect differing global orientations. For example, California has for several years been positioning itself to do business with the Pacific rim, whereas Texas is more focused on responding to the North American Free Trade Agreements (NAFTA).

Corporations had to meet two criteria for inclusion: (1) they had to be multinational firms and/or had to have an avowed international business strategy, and (2) they had to have recruited professional employees from college campuses. Four such organizations were chosen in each region, yielding a total of 16 corporate settings (see Table 1.1). Final choices were made by consulting the *College Placement Council Directory*, reviewing recent business periodicals, and soliciting recommendations from knowledgeable people in the field. Among

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[8]See Yin, 1984; Hersen and Barlow, 1976; and Campbell, 1975 for further discussion of this type of research design.

[9]For brevity and simplicity, all academic institutions in the sample, whether structured as universities or colleges, will be referred to indifferently as "universities," "colleges," or sometimes "schools."

Table 1.1

The Case Study Sample

Corporate Sites	Academic Sites
Los Angeles area	
Fluor Daniel, Inc.	University of California, Los Angeles
Warner Bros. Inc.	University of Southern California*
Toyota Motor Sales U.S.A., Inc.	California State University, Long Beach
Deloitte & Touche	Loyola Marymount University*
New York area	
Booz Allen & Hamilton, Inc.	State University of New York, Stony Brook*
AT&T	New York University
General Electrical Distribution and Control	The City College, City University of New York
Hoechst Celanese Corporation	Columbia University*
Chicago Area	
Motorola Inc.	University of Illinois, Champaign-Urbana
Household International, Inc.	University of Chicago*
UARCO	Northern Illinois University
Baxter Healthcare Corporation	DePaul University*
Houston/Dallas area	
Schlumberger Limited	University of Texas at Austin
Halliburton Geophysical Services	Southern Methodist University*
Mobil Corporation	University of Houston
Oil Company XYZ**	Texas Christian University*

*Private school.
**This firm preferred to remain anonymous.

organizations that met the eligibility criteria and were asked to participate, only three refused—and of these, two were undergoing massive downsizing and restructuring.

Within organizations, in turn, individual participants were selected in the following role categories:

- Representatives of senior management
- Representatives of the personnel or human resources department, especially those involved with recruitment and training
- Directors or senior members of two or more line departments
- Recently hired entry-level professional employees

Other individuals cited by participants as having played a significant role in internationalizing a firm's orientation were also included, as appropriate.

A counterpart strategy guided the development of the academic sample. Higher educational institutions were eligible for inclusion in the research if (1) their mission statements, curricular offerings, or program initiatives acknowledged a

concern with preparing graduates to enter a globally interdependent environment, and (2) they offered job placement services. In each of the targeted regions, four academic institutions were chosen—two public and two private—that met these criteria (see Table 1.1). As with the corporate sample, final selections of academic institutions relied on a number of sources, including the *College Placement Council Directory*, the open literature, and recommendations. Among the eligible colleges and universities contacted to take part in the study, only one (a private school) declined.

Within the academic institutions, individual participants were selected in roles roughly parallel to the corporate roles described above. Specifically, we sought:

- Representatives of high-level academic decisionmaking bodies
- Representatives of placement services
- Deans, chairs, or senior faculty in at least two departments involved with students planning to pursue nonacademic careers (e.g., engineering, business, journalism/communications, international relations)
- Graduating students seeking professional jobs

Other faculty or staff who had served as change agents in introducing an internationalized perspective to campuses were included when relevant. In all, about 350 individuals took part in the study, divided approximately evenly between academic and corporate settings. The field research was conducted between September 1991 and February 1992.

Study Procedures

Semistructured interviews with individuals in the role categories outlined above constituted the primary data gathering method. The interviews were guided by a written protocol to ensure that information relevant to the key research objectives would be systematically collected. However, the protocol was sufficiently flexible and open-ended to elicit rich and wide-ranging responses.

Interview Protocols

Substantively, the development of the protocol was influenced by several themes emerging in recent research on education, training, and the transition to work. First, in conceptualizing workforce competence, the study gives priority to current success indicators and future human resource needs as assessed for the corporate community. This emphasis is based on both practical and theoretical

considerations. Practically speaking, it is change in the economic environment that has stimulated new workforce demands. Theoretically, this focus is justified as well, because the transition from educational to organizational performance is not well understood, and there are no reliable predictive links between them. Although underlying reasons for the disconnection are still a matter of debate, the fact that it exists is not in doubt.[10] The disconnection, moreover, is likely to be even more pronounced in relation to work performance in international settings—in part because there are more sources of discrepancy between educational institutions and internationalized workplaces, and in part because these workplaces are undergoing significant and continuing change.

Second, the research approach assumes that generic skills and knowledge are likely to be at least as significant as domain-specific knowledge for effective performance in internationalized work contexts. Generic skills are those that are useful across a wide range of work tasks (for instance, problemsolving and communication skills). Domain-specific skills, by contrast, are those learned through academic coursework that are essential for work in a particular field (such as engineering or computer skills). This is not to say that specific competencies—such as high achievement in the academic major, in a foreign language, in computation, or mathematics—are not important, but rather to suggest that generalizable skills—such as complex reasoning, communication ability, learning ability, problemsolving ability, and decisionmaking ability—also demand serious attention. Recent research on job performance consistently supports the inadequacy of attempts to itemize skills specific to an occupation and underscores the role of generic skills in rapidly changing job settings.[11]

Third, the present study takes a situated view of skills, personal attributes, and their interaction. Performance situations and personal traits are believed to condition strongly how skills are enacted. Outside the context of work, ability assessments tend to underestimate how greatly situation-specific factors may influence behavior. For example, cognitive tests often focus on what an individual accomplishes in isolation from other people and things. But an accumulating body of research carried out in real-world settings suggests that activities such as adaptation, problemsolving, learning, and creativity involve countless interactions with work-group members and with other features of the work setting (tools, charts, samples, instruments, and so on). It also indicates that cognitive attributes (e.g., problemsolving in new situations) and

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[10]Gottfredson, 1986; Bailey, 1988; Brown, Collins, and Duquid, 1989; Scribner, 1984, 1986; and others.

[11]Work by Bailey, Greenan, Noyelle, Carnevale, Stasz, and others is listed in the bibliography.

socioemotional attributes (e.g., adaptability and innovativeness) are closely interrelated in actual contexts of performance.[12]

Fourth, at an institutional level, interview protocols are oriented toward implementation, or the kinds of decisions and actions that translate ideas and policies into realized day-to-day routines.[13] Organizational change literature corroborates the view that implementing a planned initiative in either industry or education always takes longer than expected.[14] However, successful outcomes often have more to do with the quality of the implementation process than with the intrinsic merit of the initial idea.[15] Without an understanding of how they are to be operationalized, strategic plans and educational goals that are realistic cannot be distinguished from those that are overly optimistic.[16]

With these precepts from prior research plus the key study questions as a foundation, approximately parallel protocols were produced for interviewing corporate and academic participants. Requiring about an hour to complete, the interview was intended mainly to elicit information about the institution and about individuals only in their capacity to carry out specific roles. Most interviewees could not respond fully to all questions. For example, senior managers often know little about the specifics of their firm's college recruitment program; on the other hand, human resource specialists may not have a comprehensive picture of the firm's international business strategy. But when the responses of all role incumbents are combined, they generate an information base adequate for answering the questions of primary research interest in this study.

Additional Data Gathering Procedures

Two additional data gathering procedures complemented the semistructured interviews: group discussions and rating forms.

Group discussions were held with recently hired employees in corporate settings and with graduating students in academic settings. These participants did not have sufficiently comprehensive information to respond to an institutional

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[12]For more extended discussions of these points, see work by Resnick, 1987a, b; Suchman, 1987; Bikson, 1987; Scribner, 1984; and other research referenced in the bibliography.

[13]Bikson, 1980; Bikson, Gutek, and Mankin, 1981.

[14]Bikson, Gutek, and Mankin, 1987; Tornatzky and Fleischer, 1990; Berman and McLaughlin, 1978.

[15]Bikson and Eveland, 1991.

[16]The seminal book of the 1970s titled *Implementation: How Hopes Raised in Washington Were Dashed in Oakland*, by Pressman and Wildavsky (1973), focuses instructively on the gap between verbalized plans and actions that concretely realize them. The gap can be thought of as an implementation failure.

interview. But they were in a position to be directly affected by plans for educating, recruiting, and training a more internationally aware workforce, if such plans had in fact been implemented. Group discussions proved to be an effective method for tapping the pooled experiences of these role incumbents.

Rating forms were designed to accompany both the interview and group discussion procedures. The forms used five-point scales to collect quantitative judgments about the relative importance of different types of skills and background experiences emerging in recent research as important for effective job performance in a firm with a global orientation. Respondents were asked to give their reactions in the form of ratings—a process that took only two or three minutes. After reviewing the ratings, the researcher could focus questions on factors that respondents judged to be very important or very unimportant.

Factors Contributing to Successful Work Performance

Participants were asked to judge the relative value of various kinds of skills and prior experiences for persons entering the workplace. Specifically, they were prompted to think about recent graduates or recently hired employees and to consider what had "contributed most to their becoming effective performers in job settings, especially in firms seeking a globally competitive workforce."[17] Figure 1.1 presents average corporate and academic ratings for the ten items judged, where 5 means "very important" and 1 "not very important." The factors are shown in descending order of rated importance.

The skills and prior experiences shown in Figure 1.1 were chosen from existing literature on factors thought to be relevant to successful job performance, so it is not surprising that participants in this study rate them all as at least fairly important. More striking, however, is the relatively high degree of consensus across regions, settings, and roles.[18] Other key findings are discussed below.

No differences were observed between regions with respect to assessments of the ten items in Figure 1.1. Consequently, when skills and prior experiences related to success in the global economic environment are discussed, it is appropriate to pool responses.

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[17]Focus-group participants received instructions to think about their own experiences as well as the experiences of their peers in making these same judgments.

[18]Ratings data were examined statistically using general linear model techniques (e.g., multivariate analysis of variance), rank correlations, and other standard procedures available in SPSS-PC software. However, because the sample was selected purposively within a replicated case design and is not a representative one, statistical procedures have been used for heuristic rather than inferential purposes. Statistically significant findings, in this context, are regarded as highlighting similarities and differences worthy of subsequent attention in qualitative data.

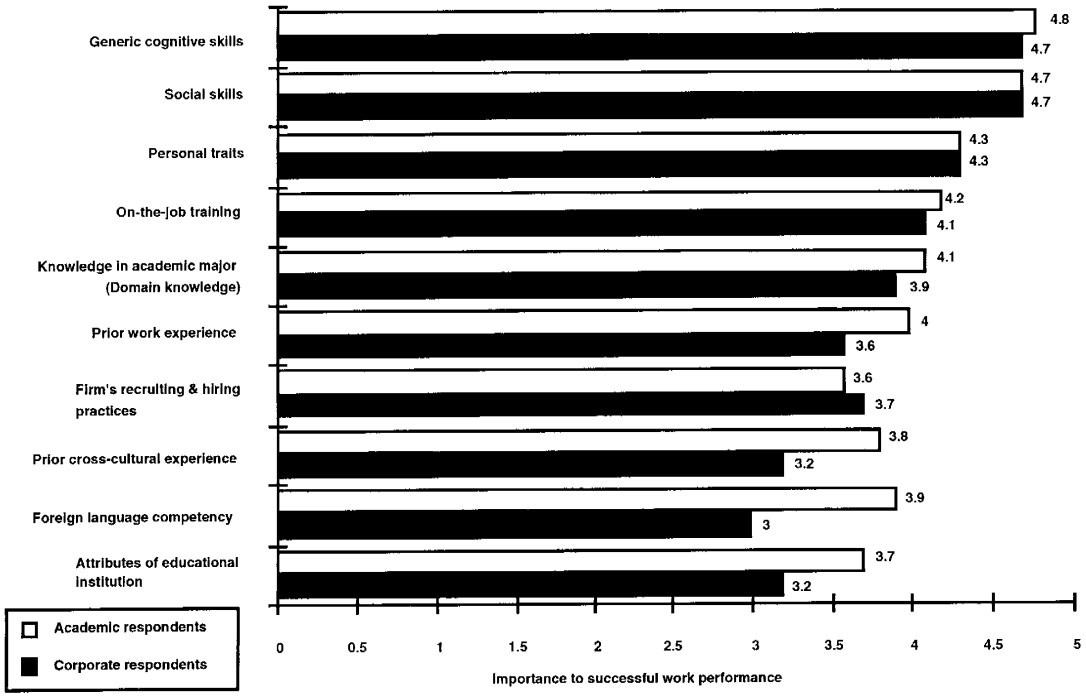

Figure 1.1—Factors Contributing to Successful Work Performance

Corporate and academic participants ranked items similarly, but academic respondents generally assigned higher values. For instance, the average importance rating of all ten items taken together was 4.1 for academic respondents and 3.8 for corporate respondents. It is likely that, with minor exceptions, academic and corporate participants hold shared views of the relative importance of the items probed.[19]

Among corporate participants, representatives of manufacturing and service firms provided strikingly similar responses. The one significant difference concerned specific knowledge in the academic major, which manufacturing firm respondents accorded substantially higher importance than those in service firms. Likewise, private and public school representatives generally produced quite similar judgments. The one exception was for the unique attributes of a school, to which participants from private schools gave significantly greater weight than did public school respondents.

[19]It is difficult to determine whether these differences in assessed importance should be explained as differing response styles, substantively different beliefs about the relationship between itemized predictors and subsequent job performance, or both. In any case, the high positive correlation between the two sets of ratings suggests that it is appropriate to pool judgments from corporate and academic participants when comparing the relative importance of specific skills, but that comparisons between sectors or between role groups should be carried out within each basic setting type.

Role groups within setting types also revealed notable consensus, with limited divergences in judgments about the importance of particular antecedent factors. Department heads rated how firms recruit and choose job candidates as marginally more important to subsequent success than did other corporate and academic role incumbents. Recently hired employees and students currently on the job market believed that on-the-job training and other workplace programs play a significantly more important part in job success than did others in their respective organizations.

The combined responses of all participants can be used to address the extent of assessed differences in importance among the skills and prior experiences listed in Figure 1.1, using the combined responses of all participants. Generic cognitive and social skills are regarded as comparably valuable and markedly more important for successful job performance than any of the other factors. Mean ratings for both kinds of generic skills are significantly higher than the mean rating for the next ranked item, positive personal traits. It is not surprising to find that generic skills received top importance ratings; however, it is noteworthy that personal traits receive significantly higher ratings than domain knowledge.

Importance ratings for generic skills and personal traits are correlated. Although the association is significant, the observed values are not high. In contrast, none of these ratings is correlated with rated importance of domain knowledge.

The reviewed literature did not emphasize the importance of on-the-job training and other firm-based efforts, which in fact outweighed domain knowledge in participants' judgments. Domain knowledge, on the other hand, is rated as significantly more important for successful job performance than prior work experience or any of the remaining items shown in Figure 1.1.

Finally, in view of the importance of global issues for the purposes of this research and its participants, it was surprising to find prior crosscultural experiences and foreign language competency in the lower half of the rankings.

Organization of the Report

The remainder of this report is divided into three sections. Section 2 presents interview findings from the corporate respondents. Section 3 presents findings from the academic respondents. (The findings from these two groups are presented separately so that readers from each constituency can readily access the material most relevant to their concerns.) Section 4 offers conclusions and recommendations.

2. Corporations and Globalism

This section provides a detailed qualitative picture of what trends toward a more global economy mean to US firms and how, if at all, their human resource needs and practices are affected. The discussion here synthesizes information gathered in approximately 100 interviews conducted with individuals as well as focus group discussions held within 16 different corporations. In all, about 175 corporate representatives took part in the study in one way or another. The corporations that participated in this research cannot be regarded as representative of US business. Rather, these firms are exceptional in being large, successful, and visible internationally as well as nationally in their respective industries. Therefore, their experience is likely to be indicative of future trends.

Meaning of Globalism

Interviews with corporate representatives suggested that they understood globalism to have two distinct but complementary aspects, one conceptual and one operational. These can be briefly characterized as follows:

- Globalism represents a pervasive and profound change from a national to an international understanding of economic activity.
- Globalism represents new ways of carrying out economic activity that respond to specific international opportunities or challenges.

Globalism$_1$

Globalism in the first sense is comprehensive and conceptual; for convenience, it can be regarded as globalism with a capital G. Its meaning is best conveyed by a selection of responses from different interviewees.

> [It means] a complete revolution in the thought process, a kind of Copernican revolution in business thinking. The economic world doesn't revolve around the United States—the United States is just one among many strong players in the global business environment.
>
> This is a different way of thinking. Everyone—in the United States and elsewhere—tends to think of their place as the geocenter. But national boundaries are disappearing in favor of decisions based on convenience of air connections, good telecommunications access, and the like.

> The United States has an overblown view of the importance of its economic and political role in the world.... US businesses are making decisions using a wrong model—a 1950s model—of the US and the world economy.
>
> We used to be an American company operating overseas. Now we're trying to become a global company, and there's a big difference in how you think about doing business.
>
> It takes a cultural change.... Everyone needs to have a more global economic understanding, and especially of their own individual role in the business, because everything is very competitive. We want a shared vision, down to the technician level.
>
> Globalization is broader than the economy—globalization is driving political and social change and other aspects of life as well. The world, not just the economy, is changing.

Globalism$_1$, with a big G, then, envisions the economic environment (and the larger sociopolitical context as well) as comprising worldwide systems of contemporaneously influential events, options, and constraints. The chief prerequisite for operating successfully in such an environment, according to those interviewed, is the adoption of a thoroughly new perspective. Frequent references to a "paradigm shift," "revolution in thought," "new model," and "new culture" indicate the pervasiveness of the change in view.

A number of common themes characterize the new view. First, most noticeable was the theme that a global view of economic activity **is not location-dependent** but rather is distributed and adaptive to local conditions. As a corollary, earlier "multinational" models of corporate activity—regarded as headquarters-centered—are giving way to more pancentric models in an attempt to overcome the "we-they" orientation. As one vice president put it, "The phrase 'home country' is losing its meaning."[1] Operational changes reflecting this orientation have been enabled by new transportation, information, and communication technologies. But taking competitive advantage of them depends on changes in thinking that, for many corporations, appear to be as hard as the changes forced on early post-Copernican astronomers.

A second theme is that globalism, although not location-dependent, **is location-responsive.** The same enabling technologies permit corporations to customize products and services for clients all over the world, communicate rapidly and directly with suppliers, distributors, and customers anywhere, and engage in a

[1]Expressing a similar viewpoint in the *Harvard Business Review*, ABB's CEO Percy Barnevik said, "We are not homeless. It's just that we have many homes." (Quoted in Taylor, 1991.)

variety of collaborative ventures with other organizations at a distance. Potentially, business activities can be adapted to meet highly specific and differentiated demands successfully in most parts of the world. "There is a sense in which we don't really ever sell the same product twice," commented the financial comptroller in one participating firm. On the other hand, corporations in other countries have similar access to the technologies that support global work. As another respondent noted, "Our competitors—the British, the French, the Germans—are all working abroad, in many countries, including the United States." As a result, competitive pressures are perceived as more intense, both internationally and domestically.

A third theme characterizing globalism is that responding competitively in fast, flexible ways to wide-ranging opportunities and challenges may entail a host of specific operational changes. In addition, it may require quite **general changes in organizational procedures**—in the day-to-day "modus operandi," in one respondent's words. As another respondent described it, "The big difference is that, in the past, companies could achieve their results with a lot of hard work, careful long-term planning, and a strong knowledge base. Now successful companies still have to produce those results—plus the infrastructure—and quickly, anywhere." Aiming at these kinds of performance standards led many of the organizations in this study to reduce levels of management, to push decisionmaking to lower levels in the hierarchy, and to make other overall changes.

Finally, such generic changes directly **link globalism in strategic planning to the way individual jobs are done**. For example, according to the head of an engineering department, "Globalism means understanding the user and the user-setting in engineering design. Good engineers have always wanted to understand how their products are used—it's just that the global context makes this all the harder and more varied. It's extremely important that project engineers appreciate these issues." For this reason he tries to send all engineers into the field from time to time. Echoing this theme, an engineer in another firm emphasized that his people, whether they have been in the field or not, need "to own the product" and "to know that they're shipping to an international customer." Training and motivation efforts stress that "if a device goes wrong anywhere in the world, it's their own problem."

Globalism$_2$

Globalism$_2$ with a small g represents specific actions undertaken by corporations on the basis of perceived new opportunities or challenges arising in the

internationalized economic environment. These kinds of changes are not necessarily informed by a global understanding in the first sense, although they probably should be. Again, responses from those we interviewed provide the best starting point.

> The more consumer-oriented a business is, the more it's affected by and responsive to global competition. You can see intense effects for product cost and product quality.
>
> We need to know what markets are emerging in Eastern Europe, for instance. We need to understand how unionization, governments' labor policies, health care policies, and other large institutional structures in different parts of the world will affect us.
>
> For one thing, our business planning cycle has changed from four years out to three years out because global politics and the global economy are so turbulent.
>
> We want to be able to put together the best team for the client's problem, drawing on the right kinds of expertise regardless of where the people happen to be located.
>
> We are aiming at the borderless career.

As these comments suggest, globalism in the second sense may take many forms and directions. Although the corporations we studied held relatively common views of globalism in the larger sense, they operationalized it in quite different ways. A few main themes and variations are summarized below.

First, several companies, for instance, had undertaken **large-scale restructuring** to replace location with other principles of organization more closely tied to the business itself. "Now we have vertical integration globally," said one respondent. Whether or not such an overall restructuring had occurred, however, many corporations had adopted a more team-oriented approach to work organization, often using teams that crossed functional or disciplinary lines. Both kinds of changes were regarded as promoting a firm's ability to make adaptive responses in a changed and changing economic environment.

Second, **expanding the knowledge base** was another effort undertaken by a number of corporations that were entering or planning to enter new markets. In some instances, the focus was on how aspects of core business functions could be altered to fit new settings; "We need exportable procedures that can be done from site to site," one participant commented. In other cases, the needed knowledge had to do with the policy or regulatory contexts in which business activities would be conducted. In still others, expertise about the surrounding history and culture was sought. According to one respondent, just knowing the

rules was not enough; it was equally important to understand "why things are the way they are," to develop a sense of what would or would not be negotiable, to get a feel for such factors as consumer patterns and preferences. Understanding the norms and preferences of different cultures was increasingly regarded as an important aspect of the US business context as well, given the size of ethnically distinct consumer populations in this country.

Third, **operational changes** reflected a heightened attention to speed, quality, and customer satisfaction, in relation to both external and internal clients. For example, shortened cycle times for planning, new product development, production of existing products and services, and so on were among the changes mentioned by virtually every participating corporation. New interactive media (e.g., "We must be very creative in communications—we make effective use of phonemail and electronic mail") and altered client orientations (e.g., "We are trying to make it more like a partnership than a classic seller-customer relationship") were also cited as instrumental to global competitiveness.

Finally, the kinds of actions depicted here are expected to be most successful when they are guided by a **broader internationalized understanding of the economic environment** (characterized as globalism in the first sense). Illustrating this point, a newly hired engineer said he thought it valuable for US students to be learning about Japanese manufacturing, Japanese management, and other aspects of Japan's culture. On the other hand, if this knowledge were not acquired in the context of a more general understanding of international trends, students might not be aware of current manufacturing development and productivity growth in other parts of Asia. "It would not be unlikely, while we all have our eyes on Japan, to see the next equivalent of a Sony or a Toshiba come from Malaysia," he said, adding that he hoped it would not take the Japan-watchers by surprise.

Summary

Corporations taking part in this research have well-elaborated ideas about what globalism means in general and for their own operations in particular. A corporate global strategy does not necessarily entail international posts or extended travel for its employees—but it might. Geographic mobility, supplemented by improved communications technology media, is in fact becoming more frequent. To some extent, the requirement for mobility depends on the job function performed and the career path of the job holder. It also depends in part on other aspects of a company's international strategy, such as outsourcing, host-country hiring, and international agreements. In any case,

globalism and its concomitants have made location a less clear-cut issue than it used to be.

On the other hand, a corporate global strategy does entail an increased need to understand—and be able to interact with—representatives of other cultures. That need arises in a number of ways. For example, it may be required for adapting products and services to new markets, for marketing and selling them, or for coping with the legal and regulatory environment within which such activities are conducted. Or it may be required for cooperating with a non-US partner firm, working within a crosscultural team, or capturing a sizable share of business from ethnically distinct market segments within the US. US firms face international competitors both abroad and at home. In sum, the ways in which corporations operationalize globalism can substantially affect the performance of professional jobs independently of where they are situated.

A fairly high degree of consensus emerged among the corporations we studied in relation to the chief dimensions of globalism. Most notably, there were more similarities than differences between manufacturing and service firms. From the perspective of this study, the distinction seems irrelevant. Within firms, the views of role incumbents frequently differed in emphasis or in specific business implications, but no real disagreements surfaced in how globalism was understood.

It should be recalled, however, that the corporations participating in the research are not necessarily representative of US firms. Their stature, together with the study's selection criteria, would suggest they are ahead of the curve in thinking about how to interpret and respond to the internationalized economic environment that confronts them. We are unable to judge the extent to which other US firms have arrived at a comparable understanding. The Worldwide Vice President for Human Resources in one firm was dubious. He acknowledged that "there is a lot of naiveté and crosscultural flag-waving about globalism in some corporations."

Human Resource Implications

Developing and pursuing a competitive strategy in an internationalized economic environment may lead to firm-wide restructuring, to the redesign of organizational units, or to new expectations about how particular jobs should be performed. All such changes have potential human resource implications.

A major objective of this study was to pursue those implications, exploring the consequences of a global business strategy on the hiring of entering professional

employees. Interviews with firm representatives and discussions with newly hired employees explored these issues in greater depth. For convenience, human resource needs have been grouped into four general categories suggested by our survey results:

- Domain knowledge
- Cognitive, social, and personal skills
- Prior work experience and on-the-job training
- Crosscultural competence

Domain Knowledge

Domain knowledge, or competence in the field of the academic major, is regarded as the starting point for global competitiveness. It is a minimum requirement for entry into professional positions. Most firms relied on courses taken and grade point averages to establish cutoff criteria for potential job candidates, a long-established practice.[2] One human resource executive's comment reflects the modal view: "We want people well grounded in the basic disciplines—this is not different."

Further, the participating firms report they are currently able to meet their human resource needs for domain knowledge by making careful choices of the colleges and universities within which they recruit. For example, a college recruiter in one firm told us, "We are highly selective. We target specific departments in specific schools that have consistently proved to turn out strong candidates."[3] In general, US academic institutions such as those taking part in this study receive high marks for turning out graduates with strong technical competence; further, computer literacy can be assumed regardless of discipline.

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[2]Although achievement levels served screening purposes, most firms emphasized that for candidates above their criterion they did not assume that higher grades indicated better job performance potential. Making this point, one firm representative said, "We are not GPA-driven. Often the highest GPA candidates aren't adaptable, or can't handle uncertain situations." Thus other indicators, including the factors discussed below, played more important roles in discriminating among eligible candidates.

[3]Rated predictors of performance on the job (Figure 1.1) gave relatively little weight both to how corporations recruit candidates and to the unique features of the schools they attended. These findings would seem to conflict with the practices just described. What interviewees told us is that there is nothing generalizable either about the recruiting approach or what the school offers. Rather, it is a matter of finding the right department or program, and sometimes the right faculty member—where "right" means consistently turning out candidates that work well in the firm. These kinds of relationships are highly valued by department heads in firms (who usually have final hiring authority) and their counterparts in universities; as noted above, these role groups attach significantly greater weight to unique properties of firm approaches and university programs in explaining successful new hires than other role groups queried. Sustaining those relationships over time, especially when the firm is not in a position to hire, becomes a matter of serious competitive concern.

On the other hand, a number of conditions created concern among respondents that it might be difficult to continue to meet their standards for domain knowledge. Entry-level domain knowledge requirements for professional jobs appear to be getting higher, especially in the sciences, engineering, and other technical fields. An engineering department director, for instance, observed that "a bachelor's degree in a hard science is now needed for some [lower-level technical] jobs because both science and the technology have gotten more complex." Likewise, a finance executive commented that "universities have trouble keeping up with the technology change curve—with tools that are already out there in business."

While domain-based competency needs are increasing, corporate respondents believe the supply of highly competent graduates is probably decreasing. A number of firms reported deterioration not only in basic mathematics and science skills but also in reading comprehension and writing ability among college graduates. Fortunately or unfortunately, these perceived skill declines were not a current problem for most of the firms in this study. The generally depressed economy meant they were not recruiting many new employees and had relatively few competitors in the hiring arena. Most of them, however, anticipated substantial difficulties in meeting their standards for domain knowledge under conditions of economic growth.

Supply-side human resource problems were not attributed directly to colleges and universities. Rather, as one respondent put it, "the difficulties start much earlier, in primary and high school grades." The universities "aren't getting students with the college entry skills they need." Consequently, they have to do a lot of catch-up work. These kinds of problems were experienced as more severe to the extent that the firm depended on skills in sciences, mathematics, engineering, and other technical or numerate disciplines. A comment made in one such corporation is illustrative: "We are meeting our needs now. But we're worried about the projected lack of science and math majors in the US if our need for engineers expands."[4] Besides questions about whether the average US high school graduate has a background adequate for majoring in these disciplines, respondents also expressed doubts about whether such majors are regarded positively, even by very good students. One interviewee, for example, said that

[4]This difference is reflected in the statistically significant difference in importance ratings for domain knowledge, reported in the previous section, between representatives of manufacturing and service firms. Although manufacturing firms encounter serious problems finding highly qualified entry-level candidates, firms that provide construction, engineering, or other scientific or technical services face similar difficulties finding highly qualified job candidates. In this instance, the Standard Industry Code distinction between manufacturing and service firms is not helpful in attempting to understand domain skill needs and could lead to underestimating their across-the-board importance.

engineering is "not glamorous" in the US, and another commented that computer science majors "tend to be seen as geeky."

For the most part, then, given present trends, corporations are uncertain about whether they will be able to meet their standards for domain knowledge in entry-level employees in the future.

Cognitive, Social, and Personal Skills

Although specific domain knowledge is necessary for getting in the door, generic skills are expected to outweigh them in accounting for successful job performance over time. In standardized ratings, cognitive and social skills, as well as personal traits, received significantly higher importance scores than domain knowledge. Qualitative information substantiates these judgments in detail. The most frequently cited qualities follow.

Generic cognitive skills are highly valued. In many corporations, for instance, **learning to learn** was mentioned as a critical component of competitive performance for entry-level employees. "A degree doesn't mean you can do the job," said the manager of a regional data processing department. "Hopefully it means you are able to learn quickly and continue to learn." Echoing this viewpoint, a recruiter from another corporation commented that their "greatest need" is for "people who will keep learning." A number of the conditions reviewed above underlie this need, including continued technological and organizational innovation as well as the fast pace of change in the political, social, and economic context of global business. Further, most respondents believed that academia cannot keep up with the state of the art as it is practiced in corporations like those participating in this research. Consequently, entering professional employees are expected to start off in a learning mode.

Problemsolving and decisionmaking abilities are also important cognitive skills. The need for such skill is more pronounced now, as firms are restructuring to compete more effectively. Business strategies that involve reducing management layers or pushing decisionmaking further down in the hierarchy, for instance, require lower-level employees to be more self-managing. As one interviewee explained, "Entry-level people used to have to know how to do what they were told. Now they have to be able to make decisions."

Social skills, particularly communication skills, have taken on added importance. Regardless of the type of job or firm, participants emphasized the need for **effective written and oral expression**. For instance, a product development engineer pointed out that "writing skills are important even at

entry level because project work always has to be reported and updated." Then, when a product is tested in the field, "you must be able to communicate with many different types of people." Most respondents in scientific, engineering, and technical positions supported the view that communication ability makes a big contribution to successful job performance, but that neither students in these fields nor their institutions make this association. Respondents in nontechnical positions held similar views. It is surprising that they reported a similar lack of emphasis on communication ability even among entering employees with liberal arts degrees. For example, a recently hired employee in a public relations department commented, "I can write a 30-page paper with footnotes in proper form. But I still have trouble writing a two-page memo that communicates an idea clearly."

Interpersonal skills received comparable attention from corporate representatives. Respondents noted that being able to work well with others has always been a part of workplace success. But the kinds of changes in organizations associated with global competitiveness increase its importance. First, there is more direct interaction across organizational boundaries with suppliers, partner firm representatives, and internal and external clients. Second, more within-firm work is collaborative, organized around projects and teams. As a human resource manager put it, projects are "never small enough for one person to do" and "almost always involve cross-discipline teams." Further, although employees are more autonomous in the firms we studied, they also have to be able to negotiate and compromise. Because academic institutions stress individual achievement and evaluate it on a competitive basis, entering employees may not have cultivated their interpersonal process skills.

Personal traits of several types were regarded as major ingredients for success in a global business environment. **Flexibility and adaptability** were cited most often, perhaps because such traits are implicated in effective responses to fast-changing conditions within firms and external to firms. Next, interviewees frequently mentioned qualities of **openness** to new ideas and practices and **empathy** with others' perspectives (particularly when they differ). Such characteristics were believed to be as important, for example, for an R&D scientist's understanding of the business side of a manufacturing firm as for a customer service manager's understanding of international clients.

The notion of **commitment to quality work**—also termed "work ethic"—was the focus of many comments. Although it is not a new concept, issues of international competitiveness have given it renewed interest. Respondents revealed concerns that US employees expect rapid rises in pay and rank but lack

intrinsic work involvement. Most believe that countries with which the US competes fare better in this respect.

Finally, successful performance in the current economic environment is thought to require people who are **innovative and entrepreneurial**. "Calculated risk-taking" and "being able to handle uncertainty" are phrases that often emerged in descriptions of such individuals.

Generic cognitive, social, and personal abilities are believed to have more influence on effective performance in globally competitive corporations than domain knowledge. However, corporations do not think universities put much effort into developing such abilities. One line department manager, for instance, contended that universities do not do a good job of teaching problemsolving or learning to learn. "These are teachable skills," he said, but "no department claims responsibility for them, so they fall between the cracks."

With respect to social skills, corporate respondents especially underscored the need for universities to prepare their graduates for group work. They see schools as presenting a highly individual model of learning and accomplishment. Addressing that perspective, one respondent said, "They're wrong about this. The key is to be able to work on teams." Another commented, "The days are gone when you could work as a lone genius."

Discussions of personal traits, although wide-ranging, offered strong support for the relatedness of cognitive, social, and individual characteristics in any performance situation. That is, the ability to make effective use of academic knowledge in task settings over time appears to depend on the concurrent exercise of other generic skills. An illustrative example came from a human resource specialist in one corporation, who explained that really successful employees "don't just adapt" to fast-changing technology, they also "contribute to the change, help make it productive." However, she noted, "this is as much behavioral as it is knowledge-based." To the extent that effective application of academic knowledge in a work setting relies on other generic abilities like those described here, it is clear why standard indices of achievement in the academic major do not necessarily predict effectiveness on the job.

Prior Work Experiences, On-the-Job Training

Given the difficulty of making inferences about future job effectiveness on the basis of academic criteria, it is not surprising that firms give considerable attention to prior work experiences and, when applicable, current training activities.

Prior jobs held appear to serve for many respondents as proxy indicators of performance in several ways. Some respondents treated prior jobs as evidence that candidates could work in a social context and that they could "meet real-world task demands with real-time deadlines." Others emphasized that anyone who worked while in school and still met the firm's academic criteria demonstrated a number of important qualities, such as the ability to "manage multiple roles" and "goal commitment."

Domain-relevant experience provides a much better index of a job candidate's potential contribution to a firm. For this reason, internships, apprenticeships, and cooperative programs (either in the hiring firm or a similar firm) are given careful attention. A still better basis for judging the future effectiveness of a professional employee is available in firms that have extensive initial training programs.

On-the-job training programs could last from months to years in the corporations we studied. They might involve rotation through a series of job functions or assignments, alternating between staff and line positions, working on project teams or with mentors, and so on. They could also involve extensive training in a specialty field. (Not all the participating corporations had such programs. For those who did, not all college recruits were eligible. The availability and type of training varied depending such factors as particular job functions and business units.) Some companies with an international strategy also make use of this period to assess the crosscultural adaptability of candidates, sending them outside the home country for part or all of the training.

Extensive training by the firm, according to respondents, serves two important objectives. First, at the end of the initial period, firms are able to make extremely well-informed decisions about how effectively, and in what capacities, a candidate is likely to perform. Second, candidates are able to make much better judgments about whether an intended occupational choice is the right one and, if so, whether the training firm would be an appropriate organizational home.

The value of on-the-job training and other workplace programs is perceived to be highest by newly hired employees and by students currently on the job market. These groups place significantly greater relevance on such factors than other role incumbents in explaining successful job performance.

Corporate representatives, however, believe that academic institutions do not generally value or encourage work experience as a significant contribution to learning. From their corporate perspective, it appeared that even though a substantial proportion of students work while completing a baccalaureate degree program, faculty are for the most part likely to regard this as a necessary evil

rather than a developmental opportunity. (While there may be exceptions to this general perception in professional and technical programs such as law, business, engineering, and some applied sciences, it is clear that academia continues to disdain the educational value of real-world experience. In addition to being voiced by study respondents, this point is made in both business and education media.)

Crosscultural Competence

Crosscultural competence is the **critical new human resource requirement** for corporations that have espoused a global business strategy. The skills and abilities reviewed in the other categories above would be expected to contribute to effective performance in almost any organization; changes made in the interest of becoming or remaining internationally competitive only intensify the need for them. Crosscultural competence, however, is a recent skill demand more directly linked to globalism. Moreover, many respondents pointed out that such a skill would be of considerable value for employees in culturally diverse or geographically distributed organizations whether or not they had a global strategy. As one human resource specialist said, "Anyone who is hired in the firm now is potentially an international engineer and has to be flexible. But there are places in the United States where you would get culture shock too."

Despite its importance, the comparative recency of crosscultural competence as a human resource need in US corporations makes the concept difficult to define. From the many detailed comments of both corporate and academic representatives, a working definition was developed. Crosscultural competence involves an internationalized understanding of the business environment, plus the generic skills and domain knowledge needed for applying it effectively in new contexts. Or, it means bringing globalism (in both of its senses) to bear on the performance of substantive work, along with the cognitive, social, and personal qualities required to carry it out successfully. The following comments from respondents in a number of participating corporations are illustrative.

> I'm looking for business globalists—people who understand business issues from an international perspective—not just the interculturally sensitive types.
>
> You have to develop carefully considered judgments about what it means to be global in respect to a particular issue. And you have to be able to do on-the-ground work in multiple regions.
>
> Our employees have learned to expect that others will not really understand the US—we have to help them understand us, even as we are trying to understand their cultures.

> We don't recruit people fresh out to go abroad. But we do look for employees who are broad culturally, in the sense of understanding fast-moving, complex global events.
>
> [Besides technical strength], other things that are very important to global success are history, geography, and political systems and their differences—understanding how different parts of the world govern themselves. When these are missing, a candidate will be able to get a job but career potential will be limited.
>
> Companies will do much better if they insist their employees learn the local language and customs. This definitely translates into a competitive advantage.
>
> Americans need to know more about the rest of the world if they want to do business in it.
>
> The inability to perform crossculturally will soon become a failure criterion. Now that ability is a success criterion.

Crosscultural competence is regarded as **multidimensional and situated**; its several components are united by the demands of particular performance contexts. Moreover, its elements are both **attitudinal and cognitive**. Speaking succinctly, one corporate representative said, "Crossculturalism is an experience, not just a content issue."

Extending this multifaceted perspective, a recently hired employee in another firm urged job candidates to develop cultural and ethnic tolerance. As a means toward this end, the employee suggested that candidates read international newspapers and magazines. Otherwise, they "won't understand why major world economic events occur. This is necessary for success," he said, "but such incentives for international awareness aren't usually stressed" in schools.

Further, crosscultural competence is identified as important by firms with a global business strategy, independently of whether an employee's job calls for travel. The need to understand and interact with individuals from different cultural backgrounds has become increasingly location-independent. Moreover, a number of companies have moved to make diverse work groups a part of the way they do business everywhere. For example, one vice president told us, "We need a workforce that mirrors the international scope of our sites and the international character of the global customers we work for. We can't do this with culturally homogeneous teams of professionals." As a result, he added, "any office, in any country, will have employees of many, many nationalities."

Finally, in most of the firms studied, being able to function across cultures is currently an asset but not a necessity for entry into professional positions. For

moving up the career ladder in a globally positioned firm today, however, it is desirable. In the future, such requirements are expected to be more widespread at ever lower levels of the corporation.

Given the emphasis on crosscultural competence as the new human resource requirement for internationally competitive firms, it is surprising that prior crosscultural experiences (e.g., study-abroad programs) and foreign language fluency received relatively low ratings as predictors of workplace effectiveness (recall Figure 1.1). Interview information suggests two reasons for this.

First, according to respondents, the value of such programs depends almost entirely on how they are implemented. Many corporate representatives, for instance, believe that study-abroad programs are too isolated and academic, creating "mini-Americas" or "American ghettos" within the host country. As a result, students do not in fact have to adapt to day-to-day life in another culture. Similarly, college coursework in a foreign language—even several semesters of it—is not necessarily regarded as productive of cultural fluency. Not all academic programs have these problems. Corporate respondents named schools in the United States and elsewhere that provide very strong language training coupled with intensive exposure to another culture. These were, however, regarded as exceptional.

Second, respondents believe that it is not necessary to possess a specific linguistic and cultural fluency in advance; rather, what is important is being willing to learn when the need arises. Knowing the language ahead of time is a real strength, the director of global strategy in one corporation acknowledged, "but understanding things from the other perspective is crucial. Living there gives you this even when you aren't totally fluent." It was generally agreed, however, that fluency needs to be acquired once an international assignment is made. For individuals motivated to overcome cultural barriers to being effective employees, this was not regarded as a major hurdle. As the international human resource director in one corporation said, "We tell them that if they're good enough to be an engineer in [company name], they can learn the language."

Crosscultural competence, then, chiefly entails a widened knowledge base plus openness and adaptability to different cultural perspectives—and the willingness to learn whatever else is needed to deploy domain skills effectively in new contexts (including, perhaps, functionality in another language). Although these sound like the sorts of prerequisites universities are well-suited to fulfill, they are what corporations find in shortest supply among entry-level candidates.

The shortfalls have to do with both the content and the experiential aspects of crosscultural competence. With respect to content, corporate respondents

pointed out, international dimensions of the academic major tend to be treated superficially or unsystematically in coursework—and may even be ignored entirely. Moreover, the broader background may be missing as well. That is, general education requirements for a baccalaureate degree can often be met without courses in subjects such as world history, geography, and comparative political science. Compared to their counterparts from universities in other parts of the world, a marketing manager told us, US students are "strong technically" but "shortchanged" in these other areas. Concurring, a worldwide human resources vice president noted, "Our US candidates are the most linguistically deprived." The general belief, then, is that job candidates are likely to lack both the international aspects of domain-relevant knowledge and general background understanding required to make successful use of their technical capabilities in a global economic environment.

On the experiential side, concerns focus on whether US candidates get enough exposure to other cultures to learn how to work effectively with individuals whose norms, preferences, beliefs, styles, and values are quite different from their own. We have already mentioned firms' skepticism about the degree of cultural exposure afforded by most study-abroad programs. They are even more dubious about the extent to which other opportunities for exposure to different cultures are exploited. Many participants contended, for instance, that in spite of efforts to recruit and retain ethnically diverse student populations, universities do little to promote regular social interaction among them. Avenues for interaction between students and ethnic subcultures in the community outside the university are still less likely to be pursued. So US candidates may not have developed the social and personal qualities required for effective performance in a globally competitive corporation.

Summary

Examining the responses of corporate representatives to questions about how globalism affects their human resource needs leads to two very general conclusions.

First, in many ways the human resource needs of corporations with a global business strategy are similar to those of other firms. Intensified competitive pressures and more complex performance demands in a fast-changing and dynamically interlinked global economy require increased academic knowledge—plus increased cognitive, social, and personal skills for applying it in new ways over time. In fact, these requirements are strikingly parallel to what firms are asking for in lower-level employees making the transition from high

school to work.[5] At present, it is generally agreed that four-year degree holders entering professional jobs in corporations like those we studied have strong domain knowledge. The other components of successful performance are much less well developed.

Second, the one new human resource requirement for corporations with an international stance—crosscultural competence—is what is most lacking in entry-level US candidates. The lack is particularly evident compared with newly hired employees from other countries, according to respondents. The comparison is appropriate for firms with a global strategy, they say; and it implies that US job candidates as well as the firms that hire them may be at a competitive disadvantage. So US academic institutions are viewed as not supplying corporations with a key strategic requirement. Summing it up, one corporate human resource manager said, "Universities don't think globally—it's not ingrained in their philosophy and curriculum to create the global worker." In Europe, in contrast, "the excitement about being in the world economy is tangible! While they're moving on, the US is sliding backward." He ended by saying, "US universities need to change—and business will be putting pressure on them."

Meeting Human Resource Needs

Given the conclusion that the new competencies required for international competitiveness are not now readily supplied by most US academic institutions, we sought to find out what approaches corporations are adopting to align workforce skills with global strategies. We found five:

- Looking beyond the US labor market
- Sending new signals to schools
- Training and development in the firm
- Updated models for international careers
- Strengthening ties with academic institutions

Looking Beyond the US Labor Market

The fastest way to meet the demand for crosscultural competence is to look beyond the US labor market in recruiting entry-level employees. Firms pursue this option in two ways, searching both within and outside the United States.

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[5]Cf. Stasz et al., 1991.

First, firms may solicit interviews with international students on the US campuses where they regularly recruit and participate in job fairs or recruiting consortia that draw international students from a number of academic institutions. In addition to conducting campus interviews, firms may make use of third-party organizations that specialize in locating international students for entry-level positions (in contrast to most search firms, which specialize in higher-level positions).

The director of one engineering department, for instance, told us that "more and more résumés for entry-level engineers come to us from non-US students." A recruiter in another organization reported similar experiences in most of the science and technology fields in which they hire. Both found that, at least below the Ph.D. level, many US students in these fields are "noncompetitive on the skill market," for reasons described earlier. Further, many international students have the advantage of being crosscultural. One recently hired engineer mentioned being fluent in English, Chinese, and French; he said that having lived in many countries was a "strong asset" in the job market. Corroborating this view, another new engineering employee said that "crosscultural capability" was a "key strength," along with "having a broad range of interests other than just technical." Although particularly difficult in engineering and applied science, the problems of finding subject-matter excellence combined with crosscultural competence are not confined to these fields. Respondents cited a number of nonscientific areas in which the same issues arise (e.g., patent law, negotiation, journalism, distribution, marketing, and many others).

As a second strategy for looking beyond the US labor market, many corporations also recruit at universities in other countries to find entry-level employees who demonstrate crosscultural competence and meet other human resource requirements as well. The worldwide vice president for human resources in one corporation explained that it was because "European students are eager to do a *'stage'* in another country, and their schools encourage it, so they have gotten better cultural exposure." Speaking more bluntly, a representative from another corporation said, "If I wanted to recruit people who are both technically skilled and culturally aware, I wouldn't even waste time looking for them on US college campuses." A third firm reported recruiting in 60 to 65 countries, acknowledging that "when we recruit internationally, we get employees we can send anywhere in the world; but we recruit North Americans to work in the home country only."[6]

[6]Some US colleges and universities were recognized by corporate respondents for their ability to turn out students highly qualified to do international work, but they are regarded as exceptional. The director of global finance in one firm, for instance, said, "There are some excellent local schools. But

It is important to note that international students are normally recruited in the United States on condition that they will work for the hiring firm in their home country. They may be retained in the United States, however, which involves extra time, bureaucratic procedures, and other costs associated with getting a work permit or permanent residency; or they may be deployed to other locations, depending on the firm's needs. Particularly for firms that are structured around business functions or processes rather than geography, location and nationality are no longer determining factors in workforce decisions. As one human resource director put it, "There are not going to be any boundaries between countries in the labor market."

Although globally positioned firms are able to address many of their human resource needs by going to the international labor market, it is not in all respects an optimal solution. First, it entails additional effort. More important, an engineering department director pointed out, "International labor competition is already tough now." Because trends toward globalism are expected to increase, expanding the pool of potentially effective US candidates in the workforce is viewed as highly desirable. Moreover, promoting crosscultural competence in the US workforce is important, not just because if US candidates lack it they "won't make it into upper management of a global company," according to a marketing department head, but because it also means they "won't make it managing a diverse workforce domestically."

Sending New Signals to Schools

A longer-term approach to meeting these new human resource requirements is to send strong signals via job descriptions, recruiting processes, and hiring procedures that candidates with crosscultural competence have a significant advantage. Such a strategy is intended both to attract graduating students who have the desired capabilities and also to let those in the pipeline know about the new skill demands. "Globalism makes a big difference in how students should prepare," we were told by the head of a customer services department.

Figure 2.1 provides a job description and related interview requirements sent to schools for posting by one of the human resource directors who participated in the study. Although not typical, this description may represent a direction that job candidates can expect to encounter increasingly in the near future. The notice elicited responses from a number of highly qualified individuals in the targeted

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of course companies will be relying more and more on places like Thunderbird, Insead, and IMD [business schools in Arizona, France, and Switzerland, respectively]."

INTERNATIONAL HUMAN RESOURCES (HR): One Position

Responsibilities will include project work in globalization, intercultural effectiveness, expatriate assignments, repatriation and general international HR.

INTERVIEW REQUIREMENTS (Juniors, Seniors, Graduate Students)

A demonstrated interest and/or academic work in international HR, as shown by any one of the following:

1. Foreign language fluency
2. Completed coursework in international HR
3. Thesis/term paper on international HR
4. Research assistant in international HR
5. Term-abroad in college
6. Foreign (non-US) student

Figure 2.1—Sample Job Description

schools, who typically met more than one of the listed interview requirements; at least three had been hired by the time of our site visit. In other cases, recruiters said that initial on-campus interviews now give more attention to extracurricular activities, particularly those that show the candidate has sought out cultural exposure. Some firms also emphasized the importance of sending out on-campus recruiters who not only have the subject-matter knowledge they are trying to enlist but also exemplify an international orientation (e.g., by having held a number of international positions).

Differences are also apparent for applicants who make it to a firm interview. In one corporation, for instance, getting hired into the international distribution division requires passing a quiz that includes such items as:

- If it is 12 noon in Los Angeles, approximately what time is it in London and in Tokyo?
- What currencies are used in Germany, France, and Brazil?
- What is the largest overseas market for [the firm's product type]?

The department director said questions like these screen out people who lack international awareness. "Realizing what you're entering into at the recruiting stage is key," according to the human resource director in another firm; the intent is to send an emphatic signal that getting the job means "entry into a global community."

Attentiveness to more than a candidate's academic knowledge may, as a side effect, result in a more engaging interview. This point was well made in a comment by a newly hired engineer who had been sought by recruiters from more than one firm in the study. He said, "Companies that have a global awareness, like [company X] and [company Y], do a very good job of interviewing. They don't focus exclusively on your technical specialties—they want to know what kind of person you are." In this process, firms also identify better candidates for the global workforce.

Training and Development in the Firm

In most of the firms studied, recruitment and initial training are closely linked and mutually reinforcing. Several reported that in fact the quality of training provided to entering employees was their chief recruiting advantage. For the firm itself, early training experiences are useful for assessing an employee's potential effectiveness in international work. A number of participating companies, for example, send newly hired US employees to an international site for initial training. Their performance in that context is treated as a good predictor of their future effectiveness in the global workforce.[7] Reflecting this view, a corporate vice president said, "Our employees have to be able to operate in a very local manner, whatever country they are in." Underscoring this point, another human resource manager said, "The biggest cause of failure is inability to adapt."

Other developmental activities may include simulation exercises aimed at increasing employees' openness to alternative cultural perspectives and working with culturally diverse project teams in US sites. Relatively few firms made use of games or simulations with the primary objective of enhancing international awareness. More often, such techniques had been incorporated to improve the management of cultural diversity domestically, with increased international understanding a positive secondary outcome.

On the other hand, teams comprising professional employees of many nationalities were more likely to have been introduced as a direct component of a global business strategy. These teams serve several purposes. First, one human resource manager told us, "The competition between members is healthy and fun, and makes for a good team. And they learn how to adapt to others from different cultures within the team, which promotes adaptation to diverse clients

[7]Some firms, in fact, believe that a summer internship carried out in a project field setting—even a domestic one—provides a reasonable indicator of whether a student is a good candidate for international work.

externally." Second, according to a number of line directors as well as human resource directors, use of such teams is often the best—if not the only—way to put together the right mix of expertise for tackling an international project. "We must be able to draw on the specialty strengths of each country," one of them noted.

Updated Models for International Careers

Globalism means shifting from older multinational, US-centered models to a more internationalized and pancentric understanding of the economic environment. Corresponding changes are beginning to appear in the ways corporations prepare their employees for international assignments. New practices diverge markedly in a number of respects from traditional relocation services, as follows.

First, corporations expect that a larger proportion of their US workforce will have international assignments. A substantial majority regard it as vital for the US employee to become domestically competent before going international—two to three years was the modal time period cited by interviewees in this regard. However, many of the firms in this study think that the first international assignment should come early in the career path. It costs less to send a junior employee to a non-US site; further, human resource managers believe that the longer the period before first exposure to work within a different culture, the harder the adaptation will be. Senior-level employees with no prior international experience are regarded as high-risk candidates for posts abroad. In response to these kinds of issues, a few of the corporations had made major changes in career planning. Although others retained separate international and domestic career paths and recruited quite different individuals into them, these firms have begun to hire all career employees as potential international candidates. Figure 2.2 shows how one of the firms envisions the difference between the two strategies. In the future, all employees in this firm will be expected to rotate between international and domestic assignments as they head up the career ladder.

Second, a small number of firms in the sample carefully developed philosophies of globalism and conveyed them to all employees. One such corporation, for example, has a policy that "the doors are open for everyone, all up and down the career path." In particular, it is unacceptable "to have only US employees in upper management and locals in lower-level roles" at international sites; rather, "all have to be treated equally." As a further move to overcome US-centered orientations, the company has a policy against "expat[riate] ghettos"; it expects employees to "learn the language and be integrated in the local culture." As the

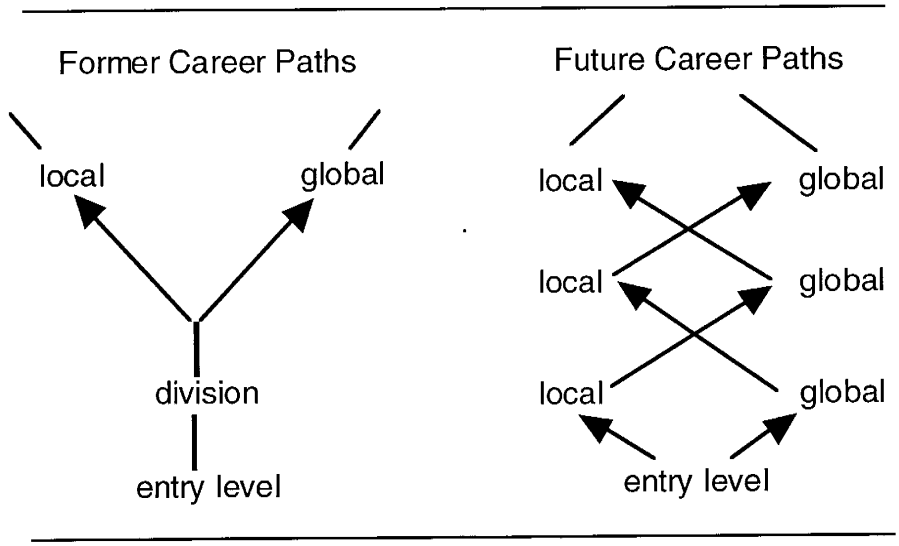

Figure 2.2—Developing the Global Manager: One Firm's Perspective

worldwide vice president for the firm expressed it, employees are expected not to behave like "guests" or "foreigners" in countries where they work, but like "citizens." He added, however, that "there are lots of cultural roadblocks" to this philosophy. Nonetheless, he contends it has increased the company's acceptance around the world.

Third, a number of changes are being made in relocation services themselves. Although international corporations have traditionally offered intensive courses in language and culture to employees receiving an international assignment, their contents are being revised to reflect the fact that a growing proportion of these career posts are held by women. Further, the increasing number of dual-career families means that firms may also assist in relocating spouses with career paths of their own when making an international assignment. To meet this new need, one firm in our study described a network of international companies whose members agreed to cooperate with one another in trying to find employment for spouses of relocating employees. If the number of US employees on international assignments increases as projected, coordinating meaningful posts for spouses in dual-career households will become a major human resource task.

Finally, dealing with repatriation after the successful completion of an international assignment is as yet an unresolved problem for corporations. Most corporate respondents acknowledged that their firms do not handle it well, concentrating most energy on making sure the outbound effort goes smoothly.

For instance, there are few services set up to help employees cope with re-entry shock—although it is often severe and unexpected. Further, it is likely that little attention has been given to reintegrating the employee into the firm in a way that builds on and rewards the international experience.

The training and development activities reviewed above represent corporate attempts to address the mismatch between existing human resources and the demands of global competitiveness. Like the signals sent to schools, these programs are aimed at improving the capabilities of the US workforce. For the most part, however, they seem chiefly to target early career stages. Problems of repatriation highlight questions about the extent to which demands for crosscultural competence in entering employees are integrated into other human resource policies and practices over the longer term. If consistent signals are not sent, for example, by the systems for promotion and compensation, efforts expended to attract and train globally competent new employees are likely to have little impact.

Strengthening Ties with Academic Institutions

The last major category of effort observed in corporations aiming at a better alignment of workforce skills with global strategies has to do with influencing and supporting education. One way to improve the supply of entry-level employees with the knowledge and skills required by internationally competitive firms is to work directly with academic institutions to produce them.

It is true that industry-university cooperation is not new and is not directly a response to globalism.[8] However, for the organizations participating in this research, cooperation between corporate and educational settings is expected also to serve that aim; and it is taking place more often, and in more varied ways, than in previous decades. Types of interinstitutional arrangements, both among universities and between corporations and universities, are described more fully in Section 3. How corporations link the strengthening of their educational

[8]The 1970s and early 1980s witnessed a significant expansion of industrial participation in university research in the United States in response to broad national policy attempts to increase nonfederal investment in R&D. These initiatives had knowledge utilization and technology transfer as their chief aims (Tornatzky and Fleischer, 1990). However, because they were expected to reduce the amount of time required to convert the results of basic science into technically advanced new products and processes, they are at least indirectly related to global competitiveness. More relevant to this study, however, are results from evaluations of industry-university cooperative research projects. There is only limited evidence that such activities were successful in meeting their technology transfer aims. On the other hand, evaluative data show these collaborations to have been highly successful at giving universities access to industry funding, knowledge, and equipment, increasing inderdisciplinary interaction among university faculty, and enabling industry stakeholders to recruit top-quality students (Hetzner and Eveland, 1986; Wigand, 1990).

involvement to their human resource requirements for global competitiveness is the focus here.

The sampled corporations are participating in traditional industry-university collaborations at higher levels. These collaborative efforts involve spending more on joint research and development efforts and research support for faculty as well as equipment contributions. According to corporate interviewees, the lagging economy is likely to mean that efforts of this type will be more narrowly targeted, not that the undertakings supported will get less funding. Additionally, some firms were involved in exchange programs that permit faculty members to spend time in corporate settings while corporation employees serve as visiting faculty. Although these activities are primarily aimed at improving education in specific disciplines, exchanges between international corporate sites and US universities or between international universities and US corporate sites are also intended to promote crosscultural competence.

Other initiatives that are able to serve needs for domain excellence as well as other aspects of international competitiveness include efforts on the part of firms to identify and support promising university programs and to provide funds for curriculum improvement efforts. One firm, for instance, says it "ties its support directly to quality of curriculum." On the other hand, corporations themselves may develop and teach courses in fields not well covered at academic institutions (for instance, interdisciplinary courses and courses that make use of highly advanced tools or techniques). Although it is often sited at the firm, such coursework is typically offered in collaboration with a college or university and is accredited.

Finally, most of the firms in the study are making varied efforts to identify and support promising students sooner. Reflecting a highly consensual view, one human resource manager said, "we need a big push to develop available human resources, starting earlier—maybe just after the first or second year—and offering more co-ops and other kinds of development programs." In the past, such opportunities have most often been offered to students in the summer of their junior year.[9]

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[9]Activities that establish relationships between students and corporations at early stages in the academic process call for careful implementation and realistic expectations. As one line department head explained, "When business was more stable, I could predict 2–3 years ahead what our projects would be and how many and what kinds of scientists I would need in the group. I could spot the right kind of students ... and give them internships 1–2 years ahead. I still do that, but without confidence that the job will be there when the time comes." He emphasized that this kind of uncertainty was "very bad for relationships with schools." Expressing similar views, a college recruiter said it was "a challenge to stay in touch with schools when we're not in a hiring mode."

Now a number of participating firms believe that some kinds of developmental opportunities should become available at precollege levels. "If the US is going to compete and to draw its employees from the US workforce," another human resource manager contended, "we have to motivate students to do well in high school." Although high schools are generally viewed as not pushing students to do "enough intellectual stretching," two areas were cited most frequently as sources of marked concern: mathematics and science, and foreign languages. In both cases, corporate respondents believe that US students are seriously disadvantaged if they do not begin to pursue coursework until after they reach the university level. In reference to language training, for instance, a human resource director said, "We are harming US students by not giving them the tools they need to work in businesses anywhere. They suffer from an options imbalance if they can only work here while those from other countries can work here or anywhere."

Although most respondents agree that functional fluency in a needed language can be acquired later in the career stream, they claim that the option of majoring in engineering or science is most likely precluded for students who have not had some courses beyond the minimum high school graduation requirements in mathematics. Thus they are not optimistic about the pipeline for future employees in these fields. Consequently, several of the corporations we studied had programs oriented either toward general scholastic achievement or toward development in specific math/science domains in neighboring high schools and middle schools. Moreover, at least one corporation regularly holds an open house for primary grade students and their parents to stimulate interest in technical and scientific careers.

With growing uncertainties about the future government funding environment for higher education (and for precollege education as well), there is a new synergy in industry-university relationships.[10] In this study, these initiatives appear to offer the best long-term prospects for addressing the human resource needs for success in a globally competitive environment. This is not to suggest that these relationships are unproblematic. Universities do not want their missions to be compromised by strings attached to corporate support; corporations, on the other hand, can ill afford to make investments that will not pay off. Further, the corporations participating in this study perceive the industry-university relationship as one-sided, with industry making all the efforts and footing the bills. One college recruiter summarized this view, saying there is "too much of a 'take' orientation on the part of professors and placement

[10]See also Wigand, 1990.

offices. Top schools especially have the attitude, 'What can your corporation do for me and my students?' It should be a two-way street—we both need each other."

Conclusions and Recommendations

Interviews with corporate representatives closed with a question about whether they had major issues to raise, points of special emphasis, or critical recommendations to make either to government policymakers or to decisionmakers in academic and business settings. Across a range of respondents, closing remarks captured a common theme: The United States must do more to nurture its human resources if it is to remain a vital and growing part of the global economy. Although the US today enjoys one of the world's highest productivity levels, the corporations participating in this study are concerned about whether it will be able to sustain its comparative advantage in the decades to come. The answer to that question, they believe, turns in large measure on the development of a high-performance global workforce.

Corporate Responsibilities

Recommendations for building workforce competency incorporated a number of key themes. It is not surprising that one set of themes focused on corporate responsibilities for human resource development. Corporations are urged to begin "seeing people as assets rather than as costs," in the words of one human resource manager. The first step in this direction, according to the director of a marketing department, would be for firms to do a better job of articulating their human resource values. "Corporations do a good job of saying the number and type of technical employees they want," he said. "But they don't say what kinds of people these should be, and what else besides technical qualifications they need to have."

Next, many participants insisted that corporations are not doing well at developing and using the abilities of the employees they recruit. Or, as one respondent emphasized, "US companies are not tapping into the capabilities of the people they have." Elaborating on this theme, a corporate division manager in another firm said, "Often there's no connection between human resource policies and business strategy." Her firm had just mounted a major effort to define its corporate skill needs in a strategic way, in order to link its training programs to long-term business plans through mission-identified "strategic competencies." The disconnection between human resource policies and

business strategies comes about, several respondents suggested, because human resources are not seen in the same way as other resources such as capital equipment. Expressing this view, a human resource director said, "There's not as quick a pay-off as for investments in technology, but human resource investments will be crucial to long-term survival." He added that companies should "not think of these as either/or investment decisions—they need to do both." However, a serious commitment to human resources, respondents agreed, is a long process rather than a quick fix. "In fact," one noted, "it doesn't end."

Academic Responsibilities

Equally prominent among the recommendations were themes that addressed education. Put simply by a line department manager, "The quality of education has got to improve. We need to raise the standards across the board," he said, referring not only to colleges and universities but also to primary and secondary schools. Respondents were pushing for improvements on all fronts. Although specific needs for advances in mathematics, science, and language learning received special attention, interviewees stressed it should not be an either/or choice but rather a both/and approach to domain knowledge and generic skills throughout the education system. Acknowledging that this would be a difficult goal to reach, however, one corporate respondent said, "It's not clear who has to take the first step."

In the meantime, at the postsecondary level, participants generally agreed that students would be better prepared for successful performance in global corporations if two types of changes were made.

First, there should be earlier partnering between colleges and corporations in relation to career development for students, especially for the design of meaningful internships, cooperatives, and other work experiences. Additionally, "faculty need to spend more time in industry and learn how it operates," a global finance manager told us. This comment reflects the general view that, even when faculty are "supportive," they are "not always effective" at linking students to opportunities in the corporate world. In-person awareness of the demands for continuous learning in the face of technological advance and work styles that depend on interdisciplinary team behavior would be expected to translate into more realistic instruction and norm-setting related to a host of significant social and personal qualities.

A second major recommendation to the academic community is to "make use of diversity in the US as a stepping stone" to crossculturalism. Corporate

respondents called attention to many ways in which cultural exposure could be attained by taking advantage of opportunities on the campus and in the community.

Government Responsibilities

When asked whether there were potential roles for government in the human resource development process, corporate representatives were ambivalent to downright negative in their comments. "I hope not" and "Keep the feds out" are two typical replies. Some respondents, however, had recommendations for what the US government should stop doing. Many firms pointed out that giving employees work opportunities in international sites is very costly in part because of US tax policies. As the worldwide vice president in one corporation explained, "The US is the only country to tax worldwide income. This puts Americans at a disadvantage in the global job market—they're too expensive." He argued that the relatively small and short-term tax revenue losses would be outweighed by the benefits of world experience in business in the longer term for the US. Moreover, a number of corporate representatives argued against restrictive trade policies on similar grounds, saying that in the longer term the US would benefit from learning to operate globally. And, despite the mass-media popularity of globalism, there were fears that a nonresilient US economy might create public pressures against open policies. Sounding this concern, one respondent said, "The domestic economic crisis may have the perverse effect of narrowing people's attention to very local concerns." But he warned that "isolationism and protectionism will not work in the next century."

3. Universities and Globalism

In-depth interviews were carried out with about 100 individuals in academic settings, and discussion sessions were conducted within each of them. In all, about 175 individuals represented the 16 academic institutions in our sample. Just as the corporations that participated in this research cannot be regarded as representative of US businesses in general, neither can the academic institutions in the study be regarded as representative of all US colleges and universities. An avowed commitment to preparing students to be effective members of the global community was a necessary criterion for inclusion in the study. The overriding objective in finalizing the academic sample was to select institutions and interviewees who could provide examples of how academia is changing in response to the challenges of delivering a globally relevant education. The final sample provides a rich and detailed picture of what a number of prominent schools are doing now in an effort to prepare their students to meet the challenges and pressures of a global environment.

Data collection efforts focused on departments whose students would probably be aiming to enter the workforce rather than go on to graduate school. We therefore interviewed many representatives of departments such as engineering, economics, computer science, geology, international relations, communications, business, and other disciplines whose graduates often enter the workforce with a baccalaureate degree. These majors also attract large numbers of international students. Additionally, representatives of other departments, such as foreign languages, political science, and foreign area studies, were interviewed.

Meaning of Globalism

One key focus of this research was to find out what globalism really means to academic institutions taking part in the study. The study wanted to discover what decisionmakers, faculty members, and students in a sample of US universities understand by the concept of globalism, beyond acknowledging that it is an obvious source of interest to the business and popular press.

Members at all levels of US colleges and universities were found to have very strong, and surprisingly congruent, views about what globalism means. Further, although specific operational definitions of globalism naturally differed from those heard in corporate settings, we encountered some striking similarities in

types of descriptions. Respondents in both corporate and academic settings make similar distinctions between a more general "macro level" understanding of globalism$_1$ (globalism with a capital G) and a more specific "micro level" discussion of the effects and implications of globalism$_2$ (globalism with a small g).

Globalism$_1$

Respondents in both schools and corporations talked about globalism at the general level in terms of a shift from a national to an international understanding of economic activity. The following quotations were elicited from academic respondents who were asked, "What, in your view, does globalism mean for academic institutions that are preparing students to enter the workforce of the 90s?" They illustrate how participants perceive the need to internalize a fundamental international awareness.

> The greatest challenge and opportunity for any university aspiring to quality and relevance in what has become an irrevocably interdependent, multicultural world is that of genuinely internationalizing itself across the board.
>
> Globalism should be seen as a strategy for empowering students and faculty to take advantage of opportunities in a global sphere, and to break out of the old mind-set that all the resources we ever need are in the United States.
>
> Twenty years from now, it is likely that truly global companies will have an international management who develop bonds beyond their national identity and view themselves rather as leaders of the international community. We as educators have to train those people today.
>
> Globalism means understanding that the world is our market; the world is our workforce; the world should be our source of inspiration and innovation. The world is also our competition.
>
> Universities have to be aware of what's going on in the world. Professors need to convince students to develop a global perspective—of course they need to develop one themselves.
>
> Globalism means we have to stop being "culturally arrogant." We can't do global business by expecting our Western values to transfer everywhere else—we can't judge the world through the same biases any more.

These comments indicate how stakeholders in US educational institutions understand that meeting the challenges of a global environment requires an adjustment in thinking and behavior well beyond a superficial level. For instance, we heard repeatedly that preparing students for careers in a global

market could not be done merely by tinkering on the edges of the curriculum. Many universities in the sample had recently reviewed their fundamental mission statements, and some had formulated new goals and objectives addressing a new global imperative. As one business school dean put it:

> Every single course we offer should be taught in the context of a global economic and political system. We shouldn't simply concentrate on Europe or Japan, or any other region in isolation; rather, faculty should teach the students to develop an astronaut's view of the world. We should drop the concept of "domestic" versus "international" business—"global" business should become the automatic mind-set.

However, this same dean acknowledged the difficulties inherent in changing fundamentally the way people think about issues. In fact, he admitted that the first challenge lies in providing faculty members with incentives and resources to change the way they teach subjects they have taught for years from a US perspective. As he pointed out, until faculty adopt and convey a global perspective, students are unlikely to do so. Similar beliefs were expressed by several interviewees in many of the sampled universities.

Globalism$_2$

Paralleling the corporate sites, academic institutions also offered examples of what globalism means at more specific, operational levels. Many respondents explained globalism in the "small g" sense in terms of being aware of what pieces of the picture change when considering individuals' future roles in the context of a globally competitive world. The following remarks are examples of such responses.

> Globalism requires that students learn how to put themselves in others' shoes. Students need to be able to ask themselves: "What would my client feel about this situation? How could my customer be thinking about this?"

> Globalism requires understanding that almost all products have a global market. You need to know if the tax and trade laws are different for your competitors, and, of course, what that means for you.

> If the sales force comes from another country, then the company needs US people who can interact with these people. They need to have experience in foreign languages and foreign cultures.

> Although virtually no students graduate and get international jobs, they have to be taught to understand that globalism affects all aspects of a business economy.

> We need to understand how business fits into the world—not vice-versa.... Globalism sounds so "macro," but people need skills at the "micro" level. We have to teach people how these levels are interconnected.
>
> US schools need to operate on the assumption that they have to teach cultural literacy. It is their job to develop mobile, multicultural people. If they don't do it, no one else will.
>
> Global business will require a different kind of leader—one who can negotiate and assess decisions in more than one culture and more than one language.

During our interaction with around 150 representatives of academic institutions, we learned that the concept of globalism is well understood—certainly by the vast majority of educators and students in the sample. At a general level, globalism is regarded as requiring a whole new way of thinking for the US education and business communities. At a more specific level, globalism is expected to affect the ways in which certain activities are handled—for example, how trade agreements are negotiated, or how the costs and benefits of moving into new markets are assessed, and how it affects student preparation to enter these areas.

Following the findings in the corporate sample, not all respondents considered the two senses of globalism as related. However, when attempts to respond to globalism at the micro level were embedded in a broader internationalized understanding, they seemed more likely to be successful. As an example, some universities had established international education or studies centers whose mission was to organize and promote a general international imperative on campus. Under the auspices of these centers, and with broad institutional commitment to internationalization, efforts to encourage faculty to redesign their curricula (for instance) were more successful than in schools where specific and isolated efforts were undertaken.

Although there was a great deal of consensus about what globalism means and about its impact on US education and business, a small number of individuals thought the whole issue was just an example of the latest business school fad. As one career placement counselor said:

> [Globalism] . . . it's just a buzzword. There are no two people with the same definition. We have to keep on doing our business as usual.

Comments like these were rare, however. Although respondents differed about the extent of its judged impact and the best ways of responding to globalism, almost everyone agreed that it means something very real. Certainly, among the students we interviewed there was little doubt that globalism was not just business

school jargon. Many students believe they are at a competitive disadvantage on the job market vis-à-vis their foreign counterparts—both those enrolled in US schools as foreign students and those studying in their own countries. They talked about their inadequate knowledge of foreign languages, cultures, and politics—skills they saw as crucial building blocks for a global career, and skills they regarded their foreign counterparts as much more likely to possess.

Human Resource Implications

Participants in this study made it clear that job demands are changing, career profiles are changing, and indeed that the world is changing for US corporations. These changes result in new human resource demands. That those demands are recognized in educational settings is clear from the extremely high correlation between standardized judgments obtained from academic and corporate respondents (recall Figure 1.1) about predictors of globally competitive workforce performance.

The skill requirements for college graduates who plan to enter professional careers are evidence of what this changing world means for students. Essentially, they should possess excellent knowledge of their own field, have superior cognitive, social, and personal skills, and have some prior relevant work experience as well as competency in other languages and cultures. The next questions to answer, therefore, concern whether students are being equipped to meet the challenge. Are US universities teaching students what they need if they are to be considered an asset to a company trying to develop a globally competitive workforce? Do US colleges and universities provide students with the opportunities they need to develop such a wide range of knowledge and skills? The answer to these questions is, in general, "No—but." The reasons for this qualified answer are complex.

Domain Knowledge

Subject-matter expertise is still a vital component of a graduating senior's portfolio of skills. Although students with high grades in their major in any field are more attractive job candidates than those with poorer grades, domain expertise was considered particularly crucial in the technical disciplines (e.g., engineering, computer science, agriculture, geology, and so on). Several interviewees also mentioned that recruiters pay close attention to grade levels in the major—partly because grades indicate proficiency in the field, and partly because grades are easier to assess than more general skills.

Illustrating this point, one career placement director explained, "Companies need skilled people. They really expect people to understand business. It's not enough to have a general undergraduate degree in business. Companies need more specific skills—like accounting and finance. Of course, bilingual and bicultural skills are a bonus!"

There was a strong consensus among those we interviewed that US universities currently do an excellent job of providing strong domain-specific knowledge. The increasingly substantial number of international students enrolled in colleges and universities around the country further attests to this strength. In particular, the technical fields (engineering, for instance) attract large numbers of foreign students. In fact, 61 percent of those who received a Ph.D. in engineering in 1990 were not US citizens.[1]

One interviewee explained, "The United States still has a comparative advantage over other countries in providing an excellent education in the technical disciplines." However, he went on to say, "companies can always go abroad to hire people who are fluent in foreign languages if that's important to them." The implication is that foreign students who choose to attend US universities for their excellent technical training might be in the best position for future employment. These students will have the same levels of technical knowledge as their US counterparts, but they will also be (at least) bilingual and bicultural when they graduate. The following paragraph, from "A Resource Guide for International Students" at one campus, corroborates this view:

> In addition to your individualized strengths and marketable attributes (education, technical skills, related work experience), as an international student you offer employers a wide range of skills and abilities, beyond those of the monocultural, one-language speaking American. These strengths, if publicized to the prospective employer, may give you the competitive edge in getting the job.

It would appear, then, that US educational institutions currently provide both domestic and international students with a top-quality education in scientific and technical disciplines. However, universities are already asking questions about how they will be able to maintain their present levels of domain excellence in the future. Corporations are requiring higher entry-level skills in response to a number of changes—among them are technological advances, restructured work processes, and increasing competitive pressures to perform optimally. On the other hand, universities are complaining that the skill levels of incoming students

[1] US Bureau of the Census, 1991.

from US high schools are decreasing. If universities have to expend more resources raising the skill levels of these students, it will become less likely that they can maintain their record of graduating technically superior candidates for the workforce.

Another point to consider is that many international students are benefiting from the same education. US academic institutions have undergone significant changes over the past decade. One major change is the increasing numbers of international students on college campuses. Foreign student enrollment has more than doubled in the last few years, from 179,000 in 1976 to around 400,000 in 1991. Although the majority of foreign students come from five Asian countries—China, Japan, Taiwan, India, and the Republic of Korea—63 other countries have over 1,000 students enrolled in degree programs around the United States.[2] Of the 16 schools represented in the sample for this research, seven are listed among the top 25 US academic institutions enrolling the largest number of foreign students during the 1990–1991 academic year.[3]

Among the foreign student population, almost half were enrolled in either engineering, science, or business degree programs. Clearly, US students face the impacts of globalism at an early stage of their careers in the form of competition with foreign students. Currently, the majority of international students return to their home country after graduation; thus they do not directly compete in the same job market as US graduates. This situation is changing, however, as US corporations start to consider international students as a resource to help them gain a globally competitive workforce. Government regulations presently make it difficult for companies trying to hire international students. However, creative solutions to bypassing these regulations are possible and also well known. The job market for US graduates will be directly affected to the extent that companies decide it is to their advantage to hire technically trained, bilingual and bicultural international students. Indirectly, US graduates will face competition from their international counterparts when they pursue careers in global corporations based elsewhere.

The general conclusion among representatives from both corporate and academic settings was that US universities are providing their graduates with the specific domain knowledge they need to be strong job candidates in the changing global job market. But many respondents also pointed out that not all universities may be able to offer such strong programs. The situation is all the more tenuous as financial resources become increasingly scarce and as schools adjust curricula to

[2]US Bureau of the Census, 1991.

[3]Institute of International Education, *Open Doors 1990–91*, 1991.

cope with lower ability levels in incoming high school graduates (either by adding courses or changing course content).

Cognitive, Social, and Personal Skills

In response to increased global competition, many US corporations currently are undergoing massive downsizing and/or reorganization efforts to reduce costs or improve performance. These changes are affecting the internal structures and processes of many firms; work may be reorganized into cross-functional project teams, for example, as firms reduce management levels and move toward lean production. Generic skills were rated as the most important assets for graduating seniors on their way to becoming effective members of such globally competitive corporations. Working in groups may increase the influence of such attributes as communication skills, empathy, ambiguity tolerance, and problemsolving abilities on successful organizational performance. Although students realize it is to their advantage to have good generic skills, they and their professors are not as sure how to develop them.

For instance, a business school professor told us, "Universities have to understand that companies need high-quality students to develop a globally competitive workforce. Technical skills are not enough. Students need technical skills, of course, but they also need to be able to communicate and negotiate with other people. We need to build generalism into our curriculum—especially into the MBA degree requirements."

Many members of the academic community considered it the responsibility of US universities to teach students how to communicate well. As one professor put it, "If we believe that teaching critical thinking is our responsibility, we must also believe it is our responsibility to help students develop the ability to communicate the results of that process to others."

Many academicians also commented on the need to devote more time to developing communication skills in the college classroom than they had in the past. They noted that students were entering from high school with increasingly poor reading and writing skills. In fact, one professor estimated that up to 20 percent of all their incoming students were unqualified to begin a college education.

Courses that required students to work on a team project and present a group report at the end of the semester have been introduced with the aim of improving both communication and group process skills. For the most part, faculty and students believe that such exercises are worthwhile. Several professors commented that US schools in general do well at encouraging

students to express themselves in class and question what they hear. When comparing US students to international students in general, one professor told us, "US students are more innovative, more critical of established models, and more tolerant of ambiguity."

Talking with students as well as participants in corporate focus groups, however, suggests that students need more opportunities to develop communication and cooperative work skills. One student commented, "Except for your first year in kindergarten where you get to share your toys in the sandbox, students are rarely encouraged to work cooperatively. We are always in competition with each other for grades and recognition." A number of professors confirmed this picture, noting difficulties created by being less able to monitor and evaluate individual contributions when group assignments are employed.

Additional impediments to expanding generic skills are presented by an already heavy set of curriculum requirements. For example, a great many students explained that they would have taken more electives to build breadth into their coursework had they had room in their schedules after all the mandatory classes for their academic majors. Engineering students, in particular, have few elective courses in their degree program. Most of them told us they found it difficult to graduate in four years with their heavy courseload, and that it was unthinkable to add such electives as debate, public speaking, or other communication courses. Some engineering students reported having made an early decision against trying to graduate in four years, being concerned that a narrowly technical education would put them at a disadvantage on the job market. According to what many college recruiters said about the need for both specific and generic skills, that strategy appears well informed. The link between specific domain knowledge and generic skills is illustrated by one interviewee who told us, "Success depends on the ability to communicate after you get the job—you need the specific skills to get the job in the first place."

The answer to the question "How well do US universities teach and develop the general skills corporations are looking for in job candidates?" appears to be "Fair." As universities have to spend more time on beginning oral and written communication skills and on maintaining domain excellence, it will become harder to allocate time and other resources to developing the increasingly sophisticated skills that corporations desire in the workforce.

Prior Work Experiences

For many students, working their way through school is not merely a strategy to round out their résumés; an increasing number simply need to earn the money

because scholarships, fellowships, and even student loans are in short supply. However, recruiters often consider prior work experience as a proxy for attributes that are hard to measure, such as a strong work ethic, good organizational skills, and maturity. Students with work experience, therefore, are likely to be viewed as interesting job candidates by recruiters. When asked the question "What do you think turn out to be the critical factors when firms or recruiters make hiring decisions about your graduates?" many college career development and placement professionals stressed the importance of prior work experiences, particularly in a job related to their major field. Many students also think it is to their advantage to have work experience listed on their résumé. The consensus among corporate representatives supports these impressions.

In one site, the career development director estimated that 85 percent of their students worked while they were in school, and that many had worked in career-related fields by their junior year in college. However, she also said that helping students find career- related job opportunities is becoming more difficult. Similar sentiments were expressed by other career development professionals. As companies cut back on the amount of on-campus recruiting they do, so too are they reducing the number of paid internships they offer. However, these same companies want to see evidence that students know something about the world of work. As one business school professor put it, "What does an undergraduate degree in business mean to a company, when the student has never worked in the real world?"

Respondents expressed concern that across-the-board constraints on companies' resources would adversely affect the number and distribution of students who attain paid domain-relevant training prior to graduation. Some corporations are willing to offer uncompensated opportunities to work; however, only students who can afford to forgo summer income can accept an unpaid summer internship. As one senior administrator at a state school pointed out, this situation can lead to several undesirable outcomes.

> An internship, to be truly beneficial, has to offer some financial gain. Otherwise, only the usual middle- and upper-middle-class kids will be able to take them, since they can do without summer income. This means they are the ones who again will look like better job candidates to the recruiters—the others won't have career related work experience on their résumés. So the same people will be held back again. Also, the middle-class kids miss out on learning the relationship between work effort and money.

Some faculty, particularly in engineering and business schools, expressed the need to develop more and better internship opportunities for students. However, many students we interviewed talked about the lack of faculty

encouragement and support when they actively look for internships or other job opportunities. In fact, some students told us faculty had actively discouraged them from seeking work experience. Many of the career development counselors corroborated this view. One career services director told us:

> Students used to take a faculty supervised, paid, part-time or summer work practicum, but that's gone now. Faculty weren't too interested in the extra work load. Now students can take an internship for course credit, but that has to be approved by the department, and that then depends on finding a supportive professor.

So the data indicate that for the most part, universities are not doing a particularly good job of supporting and encouraging students to seek and secure work experience while they are in school. To say that having a job detracts from class performance, as we heard from some professors, seems somewhat shortsighted for at least two reasons. First, many students have to work to support themselves, at least partially. And second, recruiters give preference to students who have some work experience, particularly if it is career-related. For both of these reasons, it would benefit students to have support from faculty in particular and the institution in general.

Crosscultural Competence

Crosscultural competence was considered by members of both the academic and corporate communities to be the most important new attribute for future effective performance in a global marketplace. However, they believe it is what US citizens are most lacking. Until recently, the United States was able to remain economically as well as geographically independent of much of the rest of the industrialized world. However, that is no longer the case. If they are to participate effectively in a global economy, US students have to learn how to think about their relationships with others in the world. And they need to be able to do this at all levels, from interpersonal interactions to corporate business transactions.

When asked whether they think international students have a comparative advantage over them in the hiring market, US students often say they are confident that by graduation, their college education will be as good as that provided by universities in other developed nations. However, they often go on to say that they are losing out to international students on one important dimension—crosscultural competence. For purposes of this research, crosscultural competence is defined to include the ability to understand the economic environment and individual work roles within it from an integrated,

international perspective, along with the specific and general skills needed to enact those roles effectively in particular workforce contexts.

Senior decisionmakers, faculty, and students all seemed to agree that developing crosscultural competence in US citizens in general, and in the future workforce in particular, is the most critical task facing US educators. As one student said, "I feel Americans suffer from the stigma of being thought of as ethnocentric. I want to change that, but it's hard without having any international exposure. I feel deprived and also defensive about my education."

Respondents in the corporate sector talk a great deal about the need to hire graduates with a sense of what it means to be a part of an interdependent global environment—even though they may not necessarily be leaving their home state after graduation. Although this message may not yet have trickled down to change much about the recruitment process, it was certainly articulated strongly by many senior managers. Because it is unlikely that companies will become less concerned about meeting the challenge of global competition as time goes on, recruiters are expected to pay increasing attention to job candidates with some degree of crosscultural competence.

The scope of the challenge to provide an education that ensures student development of crosscultural competence along with other knowledge and skills they need to function effectively in a global workforce is aptly described in a report prepared by one of our interviewees, titled "The Internationalization of Higher Education."

> International education is a composite of global knowledge, skills and awareness which, as a package makes the individual globally aware of the diversity of cultures and societies as well as of their inter-connectedness. International or global education should enable us to cope with the irrevocable interdependence of humankind—socially, politically, economically, ecologically and on grounds of human survival.

The report suggests that "attempting to internationalize an institution is like trying to put socks on the tentacles of an octopus!"

Many university policymakers acknowledged the role of educational institutions in helping US citizens understand what an industrial nation has to do to be globally competitive, and what that means for individuals who live in the country and contribute to its economy. As one interviewee explained, "If colleges and universities want to graduate students who can function effectively in the 21st century, then it is their job to help those individuals develop an

understanding of the world and how it works. To do anything less is to do these students a disservice."

Meeting Human Resource Needs

Below we discuss the initiatives US educational institutions are undertaking in response to the need to provide a more global education for their students. They fall under four main headings:

- Curricular changes
- Extracurricular changes
- Faculty development
- Innovative cooperative ventures

Curricular Changes

Without exception, academic policymaking bodies in every university in our sample either had recently revised, or were in the process of reviewing, their curricula with the aim of better preparing students to function in the globally interdependent environment of the 21st century. Role incumbents from all levels of the academic hierarchy seem to think that the first step for any university trying to come to terms with internationalizing the institution is to rethink the curriculum. Why this is the logical place to start is well summarized by a statement from one school's report on "The Internationalization of Higher Education." It reads, in part,

> The heart of the internationalization of an institution is and will always remain its curriculum precisely because the acquisition of knowledge, as well as the conduct of research, is what a university is primarily about.

A range of approaches to internationalizing curricula emerged, some more extensive than others. The scope of the initiatives was often limited by financial and related resource constraints, rather than by an unwillingness to change. We found several examples of universities where one or more **internationally oriented courses** had been added, either to the core curriculum or as required courses in a particular major. As an example, in 1991 one university amended four of the upper-division core requirements to include courses considered to convey critical knowledge for students graduating into a complex, interdependent world. These four courses were: European traditions; non-European traditions; US pluralism; and implications of science and technology.

Several interviewees mentioned the need to teach students how developments in technology are influencing interactions among organizations and countries. In fact, a few universities in the sample are themselves exploiting technological innovations to increase their own interconnectivity with external institutions. As one dean explained, "The university should be a global village. Students should have access to multicultural experiences regardless of where they are in the United States. Via satellite links with other academic institutions, US students could interact with students all around the world." In fact, at that particular university, the business school had already established satellite links with universities in Mexico and Hong Kong.

A business school professor at another university suggested that information technology developers consider using universities as beta test sites. In that way, both parties would benefit from the arrangement. Universities could take low-cost advantage of the opportunities the communication media offer, and vendors would learn how well the technology performed in a different set of institutional settings.

We found many other examples of recently created, internationally focused courses: international business management; international competitive advantage and technical change; crosscultural issues and international management; world economic problems; the international debt problem; and others. One particularly innovative course was called "comparative management studies." In this class, students learn important business analysis skills, as well as how country and cultural context influence the structure and performance of an industry. The students choose a core US industry (e.g., the automobile industry) and compare its organization in the United States with that in a chosen competitor country. During the year, the class visits the comparison country, interviews stakeholders in the industry, and prepares a final report. At the end of the semester, the report is briefed orally to business leaders in the United States.

Although introducing new courses is one approach to internationalizing the curriculum, not everyone judged that this was the best way, or the only way, to do it. As one provost put it, "Universities can't simply introduce one new course, or even one new major, then sit back and rest on their laurels. Globalism has to become part of what the institution is about—it has to be reflected in all courses in the curriculum." Similarly, a professor told us that "globalism should not change the curriculum itself, rather it should affect the content of all the courses."

Many participants, including students, shared the view that **internationalizing the existing curriculum** was critical. We heard from a number of respondents

that although having the option to take international courses is beneficial, it is not enough. Commenting on the one international business class in an otherwise unchanged curriculum, a student explained: "We've been taking business classes here for four years, and then right at the end we get to take 'international business,' like an afterthought. Business graduates need to know that culture, laws, and regulations are different in other countries—and we need more opportunity to learn about them—we can't learn everything all at once at the end."

The approach that such respondents favor is to introduce an international component into every course, for example, by illustrating engineering issues with non-US examples, or using international cases for class discussion in business courses. Many students contend they would understand the implications of global interdependence better if they were shown how it is part of all major domains. At least one university in the sample had recently surveyed its faculty members, asking them to indicate to what extent they had incorporated a global component into their courses. Of course, as several respondents noted, it is not easy to determine whether or not faculty have in fact changed the content of their courses, and it is nearly impossible to make them do so.

Several senior decisionmakers and professors pointed out that to change substantive course content takes not only leadership but also time and effort on the part of faculty members. Further, as the tenure and promotion system now stands, there is little incentive for faculty to take the time to revise what they teach. Tenure eligibility, for instance, is assessed in principle on the basis of four criteria: research/publication record, teaching, professional competence, and community service. In reality, decisions are based primarily on publication record or on a combination of publication record and teaching record. One university is offering faculty incentive awards of up to $1200 either to internationalize an existing course or to introduce a completely new global course. Professors are also encouraged to develop courses in cooperation with faculty from other departments, to promote innovation and interdisciplinary collaboration.

The general consensus, nonetheless, appears to be that internationalizing the entire curriculum, although perhaps ideal, is unlikely to happen—particularly within the current institutional reward system. But the suggestion from one study-abroad adviser, that "senior academic officers should mandate faculty to internationalize their curriculum," is unlikely to be happen.

Another kind of curricular change encountered at many universities in the study is the introduction of **dual majors**, or **new major/minor degree options**. Some

professors and senior decisionmakers considered the development of such alternatives to be the most effective way of helping students gain a more internationally relevant education. In some institutions, the increased interest in foreign area studies and interdisciplinary degrees has led to the foundation of centers to coordinate and monitor international studies on campus and to oversee interdepartmental degree programs. Organizations such as these provide credibility and momentum for multidisciplinary programs—usually defined by a particular foreign area emphasis or an intercultural or global theme.

One high-level academic policymaker explained that a "Center for International Education" or "International Studies and Overseas Programs" or "Office of International Programs" signals an institution's serious commitment to international education. An institution has to have "a locus of responsibility and leadership for its international activities." He went on to say that the director of such a center should be accorded high status (e.g., dean status) and be directly accountable to senior academic officers (e.g., to the provost). He assured us that the commitment of top decisionmakers in the university is crucial to the success of such initiatives.

Some of the universities in the sample are starting to offer joint business/foreign language majors, or at least business majors combined with a core emphasis or minor in a chosen foreign language. Such options are attractive to business students. Many explained that they would be unlikely to take language courses in traditional departments— either because the classes fill up with language majors first, or because they feel stigmatized by some professors and students because they are not "real" language majors. As one student put it, "It's hard to take a foreign language at the same time [as a business degree]. It would be better if it were required, then we'd have to take it, and they'd have to let us in." Another student agreed, adding that "business students don't take foreign languages, so we don't feel empowered to go abroad during the summer or look for foreign internships."

However, for some universities, budget cuts and hiring freezes make it impossible for departments to create dual majors. One department head told us, "I had proposed that we create some dual majors, like Spanish and Business, or German and Business, but was told by senior administration, 'That's a frill we just cannot afford.'"

During the interviews, we probed specifically about the role of foreign languages as an integral part of the internationalization of the undergraduate curriculum if the question was not raised by interviewees themselves. We discovered quite a range of responses. Many curriculum planners think that requiring two years of

a foreign language would be ideal. One such individual argued that "the limit of my language is the limit of my world."

Respondents also talked about the need for US students to learn another language—both for their own personal development and also to compete with college graduates from other countries, most of whom speak at least two languages. As another professor said, "You never develop a true sense of other people if you don't speak, or at least appreciate, their language and their culture."

However, many faculty and senior decisionmakers also pointed out that the resources often do not exist to support foreign language requirements. Indeed, one professor explained that, in some cases, it was difficult even to offer two-year language options. He said that from one year to the next, it was hard to judge whether the resources—money and faculty—would be consistently available to continue to offer the courses, let alone to require them of everyone.

Other difficulties associated with requiring all students to take a certain number of language credits were also cited. For instance, faculty members in traditional language departments are often reluctant to teach functional language and other beginning courses, and resent being regarded as a "service department" for other disciplines. As one dean said, "Language departments! That's a misnomer. They should be called 'Literature Departments.'" Further, several respondents also commented that because basic English oral and written communication skills are quite limited in many of the high school graduates they enroll, it is unreasonable to require foreign language courses. Some universities have to worry first about bringing the English skills of their students up to a college level.

The vast majority of those interviewed believe that finding ways to incorporate foreign language training into a college education is critical for US educational institutions and their students. This statement from the President's Commission on Foreign Language and International Studies (1979)[4] makes the point clearly: "The President's Commission believes that our lack of foreign language competence diminishes our capabilities in diplomacy, in foreign trade, and in citizen comprehension of the world in which we live and compete." Since that report was prepared, it is safe to say that although international competition certainly has increased, there has been little or no improvement in the ability of US citizens to understand or speak other languages.

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[4]Cited in M. Harari, *Internationalization of Higher Education: Effecting Institutional Change in the Curriculum and Campus Ethos*, Report #1, Occasional Report Series on the Internationalization of Higher Education, Center for International Education, California State University, Long Beach, 1989.

Extracurricular Changes

During our interviews, we asked high-level academic officers, faculty, and students whether any new noncurricular initiatives had been developed in response to the need to internationalize the institution. We particularly inquired about study-abroad programs and about the integration of international students on campus.

In general, there was a great deal of enthusiasm about the benefits of **study-abroad programs** on most of the university campuses visited. However, these feelings were not evenly distributed throughout the university. Most frequently, only a small core of individuals were committed to pursuing study-abroad opportunities for students. These individuals often operate under tight budgetary constraints and may not be well integrated into the university—in fact, they are sometimes located in small buildings apart from the campus center. One study-abroad adviser said she thinks the programs receive more attention from upper-level administration now than in the past; but she also reported that "many faculty members don't see the value of study-abroad programs—and they resent having students taken out of their classes."

A small number of interviewees also expressed their concern that students studying abroad end up in "American ghettos" where they meet only other US students and gain little or no cultural exposure. However, most interviewees attest that even in this worst-case scenario, it is still worth it for US students to get away from their own country and see that the rest of the world is real.

Students who had studied abroad emphatically corroborated the view that the experience enriches their education. One student who had spent a year in Spain teaching English to young schoolchildren told us, "If you stay in your own country, you don't ever really become self-sufficient. My experiences abroad made me a braver and stronger person. I feel empowered to go and do well anywhere now." Moreover, at one university, a group of students who had studied abroad described an initiative they started to encourage other students on the campus to consider studying outside the United States. These students organized information sessions in the residence halls and classrooms to explain the benefits of an international experience, the range of options available, and how financial aid packages work.

The cost of study-abroad programs continues to be perceived as a big problem. Some universities in the sample offer financial support to make study abroad an option available to all students. One study-abroad adviser explained the situation this way: "Study-abroad programs used to be a frill for rich kids. We

can't afford to let it stay that way. We have to be flexible with financial aid packages." Illustrating the desired flexibility, this interviewee cited situations in which their own school has no arrangement with institutions in the country where a student wants to study; then students need to organize their study-abroad program through another school consortium. In these instances, students should be eligible for the school's regular financial aid package, even though they will be enrolled for one semester through another school.

One especially innovative initiative to make study-abroad opportunities affordable to all was student-driven. In this case, two students lobbied for and secured a change in the State Code of Education to allow the university to collect one dollar extra per student at registration. The resulting amount—about $100,000 each year—is put into a scholarship fund to support students who want to study abroad but who need financial assistance to make it possible.

Study-abroad programs are generally considered to enhance the global awareness of those who take advantage of them. Commitment to such programs by high-level institutional leadership appears essential to overcome faculty resistance and encourage students to take advantage of the programs. Underscoring this point, one study-abroad administrator commented, "In spite of this place, some students actually graduate who can function crossculturally—no thanks to institutional commitment."

Another avenue to cultural exposure is potentially available by virtue of the presence of **crosscultural students on campuses**. As noted earlier, there are about 400,000 international students currently enrolled in universities in the United States. When asked about the extent to which international students are considered as on-site resources for faculty and students, almost all respondents agreed that their potential as global educators is virtually wasted. As one dean told us, "Having international students on campus is not enough. We have to recognize international students as resources. We have to integrate them into the academic and social aspects of university life."

Our site visits elicited a number of efforts to integrate international and US students more meaningfully. For instance, one university has an international residence hall, where US and international students share rooms together throughout an academic year. Another university has organized a "Diner's Club," where a faculty member helps international students select a local restaurant that serves their home country cuisine. A combination of US and foreign students then go together to eat there. Other universities organize lunchtime and evening presentations by international students about their home country and culture. More ambitiously, on one campus, different evenings in an

international residence were designated as French night, Japanese night, German night, and so on. Nonresidents of the hall could have dinner there on condition they agreed to speak only the target language.

The general conclusion, however, was that international students are not regarded as resources. For the most part they are ignored by US students and are isolated socially from most campus activities. Again, as with the study-abroad initiatives, efforts made to better integrate international students are often linked to one or two committed faculty or staff members who personally value international exchange. Usually these individuals are people who have traveled extensively, or have lived and worked abroad themselves. Until more than lip service is dedicated to the value of student diversity on campus, the crosscultural resources inherent in international students will probably continue to be neglected.

Faculty Development

Academic interviewees were asked whether the trend toward globalism had affected faculty hiring decisions, and whether new opportunities or incentives for professional development had been introduced. The answer to both questions was "Yes—but." Budget constraints and hiring freezes are currently preventing many institutions from implementing the number and the scope of changes that they would otherwise like to undertake in relation to faculty development. A widely shared view among those interviewed is that internationalizing the faculty is a critical part of globalizing the institution. As one provost put it, "The key to achieving globalism on campus is to give the faculty international experiences. If the faculty buy in to globalism, then everyone will."

We encountered several examples of faculty—particularly from business, engineering, economics, and foreign area study fields—who are engaged in varied international development opportunities. Many of the initiatives we learned about involve faculty visiting Eastern European countries that are making the transition from a communist to a capitalist economy; they teach and consult with government and academic institutions. We also found instances of faculty, government, and industrial community representatives from other countries visiting for a semester to collaborate with US faculty. The visitors often teach courses or give colloquia while they are here. In this capacity, they supplement the international expertise of regular faculty.

With respect to hiring new faculty, many directors said that, because of budget cuts, it is very difficult to hire anyone at all. When positions are opened, many departments actively look to fill them with faculty who have international

experience and interests. On the other hand, some respondents remarked that directors making hiring decisions often pay more attention to matching their own personal research interests than trying to build a faculty with international expertise.

An international studies program at one university in the sample had found a way to influence parochial hiring decisions. When the program was formed, several faculty positions were also created, despite the hiring freeze imposed on individual departments. The dean of the international program approached various department chairs and offered one of the faculty positions to each. He imposed the condition, of course, that they hire someone with strong international expertise to enhance the curriculum and research opportunities for the students of the international studies program. He was thus able to influence hiring decisions by leveraging the power he had been given by top-level academic officers.

Innovative Cooperative Ventures

Probably the most exciting and promising long-term strategies for internationalizing US academic institutions are the innovative, outward-looking, joint ventures between individual universities and other institutions, including corporations. As resources become more limited, schools are realizing they cannot hope to meet all the challenges of providing a global education without significant new means of support. The following are several examples of such initiatives.

Joint programs among several universities, such as the Southern California Consortium on International Studies (SOCCIS), have been created. SOCCIS is an association of 19 universities in the Southern California region that share international resources among member institutions. Students who attend the member schools can participate in international seminars and conferences, use the SOCCIS film library (with a collection of approximately 300 films and videos on international studies), enroll in member institutions' foreign language, literature, and interinstitutional courses for no extra fees, and take advantage of other pooled international resources. SOCCIS has also organized a Standing Committee on Internationalization of the Curriculum that focuses on institutional efforts to increase the international and foreign area studies content of the curricula at all member schools.

Other joint-program initiatives more directly target substantive curricular content change. In 1990, the US Department of Education selected 16 universities across the country to house Centers for International Business Education and

Research (CIBEAR). The chosen universities each receive approximately one million dollars—matched by the institution—to support projects to internationalize the nation's teaching and research programs. Four universities in this study sample are recipients of CIBEAR awards. The infusion of funding has enabled these schools to attract excellent faculty, visiting scholars and students, to develop innovative programs and courses, and to build strong links with the international business community. The centers also help coordinate international faculty and student exchange programs. Specific examples of CIBEAR-sponsored activities include:

- A task force of 26 corporate executives, faculty members and students to organize a Global Agenda Symposium. The purpose of the symposium is to discuss the challenges of companies as they transform into global entities, and the necessary components of graduate-level international business education to prepare future managers to respond effectively to these challenges.
- An International Business Roundtable for Senior Executives.
- An Asia/Pacific Business Outlook conference, co-sponsored with the US Department of Commerce.
- International business consulting projects with local firms interested exploring business opportunities in the Pacific Rim.

The CIBEAR programs clearly facilitate a great deal of interaction between the academic and corporate communities in their regions. We learned of several other direct **cooperative ventures between academia and industry**. In some cases, corporations contract with faculty from local universities to teach foreign languages or other professional development courses to their workforce. An innovative example is afforded by a corporation in our sample that had started offering BS and MBA degrees in International Business, in conjunction with accredited US and British universities. The US faculty members we interviewed were hopeful that increased interaction with local corporate leaders as well as their international counterparts would enhance their efforts to globalize the curriculum. Some business faculty also reported that they invite many international business leaders to come and give guest lectures to their students.

Another university in our sample had developed an "international intern" program, co-sponsored by its Center for International Education along with the Career Development Center. The program is designed to encourage local businesses to offer internships to international students completing their "practical training." A pamphlet explains to companies how they can go about

hiring international students, details the benefits of such a venture for them, and describes how such organizations can sponsor their student interns for longer-term employment (3 to 5 years) after graduation if they want to continue the association. The pamphlet emphasizes, in bold print, "As we enter the 90's, the 'Global Economy' continues to become more of a reality." One corporation participating in this research reported positive experiences with the international intern program.

One university in the study, under the auspices of its International Studies and Foreign Study Program, had applied for and received a large European Community (EC) grant to study shared EC-US related issues. The director of the program is developing internship contracts with the EC parliament in Brussels, whereby selected US undergraduates with knowledge of two EC languages will spend time in Brussels conducting research for the EC parliament.

This exploratory study turned up a sizable number of specific noncurricular ventures aimed at promoting international knowledge and multicultural exposure. Besides those outlined above, other examples of innovative initiatives include: internships through Consulate Generals' offices; internships in developing countries through the World Bank; and foreign student alumni networks for internship contacts and international student recruiting. Many universities—and even schools, programs, or departments within them—have established boards of executive advisers from area businesses with international interests; and several have organized issue forums to stimulate dialog between academia and the corporate sector about global competitiveness.

It seems clear that if US academic institutions are to meet the challenge of preparing students to be effective members of a demanding global marketplace, they would do well to pursue a mix of opportunities to internationalize their environment. Exploiting local diversity, revising the curriculum, promoting student and faculty development in international directions, and seeking new contacts with institutions to expand prior boundaries—all are viewed as globalizing US education. However, formidable financial and attitudinal constraints are expected to make this process slow, difficult, and demanding.

Conclusions and Recommendations

The final question put to academic participants was whether they had any important recommendations or summary messages to deliver to government policymakers and decisionmakers in the educational and corporate communities. We wanted to reflect the major conclusions of those we interviewed in the

educational institutions participating in this research. Two main issues were stressed by the majority of respondents.

One of the clearest messages from academic respondents is "Help, we can't do it all with the dwindling resources we have available to us." In virtually every interview at all levels of the university hierarchy, respondents told us they are willing to accept the challenge of providing a globally relevant education to their students. Most acknowledged that the status quo would have to be changed if the US education system is to give students a chance to become effective members of a globally competitive labor market. And most are trying in some way to take the necessary first steps.

However, if high school graduates arrive less prepared in basic skill areas as budgets decline, then the problems facing higher educational institutions become greater and greater. Without additional resources or the radical reallocation of existing resources, many respondents maintained, it is already difficult to ensure the same level of achievement as ten years ago—let alone to implement new efforts to change and internationalize the higher educational system to serve the needs of future decades.

Not everyone agreed on where additional resources should come from and how relationships to resource providers should be managed. Opinions about the role of government intervention, for instance, ranged from those who said the less government involvement the better off universities are, to those who argued it is the responsibility of government to advise and fund most new initiatives. Many respondents also contend that the business community ought to share the cost and organizational burden of providing an international education for US students—particularly because that community will benefit considerably from the effort. In short, despite disagreement about the source and management of additional resources, the overwhelming consensus among interviewees is that uncertain and dwindling resource availability is now a great problem. Paucity of resources at present has an adverse effect on US academic institutions' efforts to meet the challenge of providing graduates with the new skills they will need in the global marketplace.

The second issue raised by a significant number of interviewees involves the perceived lack of effective communication between the corporate and academic communities. Decisionmakers and stakeholders in the sampled schools viewed this problem from two angles.

First, many people said that in order for schools to respond effectively to the pressures of global competitiveness, it is the responsibility of the corporate community to articulate its needs and expectations clearly and consistently. One

business school dean, making this point, insisted that "US business is retarding the efforts of universities to globalize students and the workforce. They are sending all the wrong signals. They don't tell us clearly what they want, and don't model the behavior they seek—so we don't believe them. How many executives do you know who are trying to learn German? We've got nothing to go on."

However, although schools wish for better communication with corporations, academic representatives acknowledged they would never shape their mission and goals entirely around the demands of corporate America. They did not consider this to be an appropriate role for higher educational institutions in the United States. However, many of them also recognize the necessity of a link between the educational goals of these institutions and the needs of society at large. A sizable proportion of respondents told us that corporate guidance in setting priorities for first steps toward globalism would help them to better target their efforts. Any communication that lessens the chances of wasting resources—particularly since they are currently so scarce—would be welcomed by most decisionmakers in academia.

Respondents also talked about communication problems with the corporate community from a second angle. Many participants contended that if corporations want universities to help them develop a globally competitive workforce, then they should reinforce the efforts taken by academic institutions to do just that. Career development and placement counselors in particular expressed their disappointment and frustration with corporate recruiters, who still give priority to the same types of students they did ten years ago. Many respondents emphasized that although CEOs may profess a need for highly articulate graduates with a broad educational background and crosscultural competence, recruiters seldom seek out such candidates or refer them for on-site hiring interviews. A high grade point average in an academic major is what gets their attention. The following remarks from two placement officers are telling.

> CEOs say they need multiskilled, multifaceted students, but recruiters are still looking for the same narrow specialists.

> Recruiters are too shortsighted. CEOs agree that they need to change the way they do business, but recruiters won't respond.

Not all career development officers, however, hold recruiters solely responsible for corporate America's tendency to undervalue candidates who have tried to make their education internationally relevant. Many explained that college recruiters often have little organizational status and are under pressure to supply line managers with graduates whose skills they need in the short term. Some

interviewees say that until senior management seriously rewards recruiters' efforts to hire students with new skills, then nothing can be expected to change on the human resource supply side. Two respondents captured the situation in this way:

> Too often, the college recruiting/relations department is seen as the stepchild of the corporation. This needs to change. Recruiters need to have more decisionmaking power, more resources, and more status.
>
> Corporations should stop paying lip service to globalism. Some universities are really trying to provide a global education. Now the message has to get down from the CEO to the recruiter that it's OK to hire these "new" students.

A third respondent summed up the situation the most succinctly in saying to corporate America, "Get your message straight! Do you want global people or not?"

4. Conclusions

The research on which these conclusions are based is exploratory and qualitative in nature. Answers to the key questions that framed this study represent the perspectives of its participants. Moreover, we cannot claim that the academic and corporate sites we visited constitute a representative sample or that what holds true of them will generalize nationally. On the other hand, the types of issues confronting these organizations are not unique to them, so it is likely that their responses to an increasingly internationalized and dynamic economic environment will provide interesting and instructive examples from which others can learn.

Globalism Revisited

The first conclusion from this research is that globalism is not just hyperbole. Rather, it is shorthand for a collection of important, interrelated influences that condition workforce competitiveness all over the world. Two complementary senses of the term should be distinguished. In its broadest meaning, globalism refers to an entirely different model for thinking about economic activity, involving the shift from a national to an international understanding. Metaphors such as "Copernican revolution in thinking" or "taking an astronaut's perspective on the business world" convey the scope and pervasiveness of the change. In a narrower sense, globalism designates new ways of carrying out economic activity in response to specific international opportunities and challenges. Such initiatives are quite varied and may range from large-scale organizational restructuring to changes in product cycle time and service customization or to changes in the nationality of the bank from which loans are acquired.

It is important to underscore that globalism, as characterized here, is not location-dependent but is location-responsive. That is to say, an internationalized understanding of economic activity in the broad sense of the term is as likely to affect how business is done domestically as it is to affect activities abroad. On the other hand, whether business activities are conducted within the United States or elsewhere, heightened competitive pressures are driving firms to adapt them to local needs, norms, preferences, and values.

The corporate and academic participants in this study have highly congruent interpretations of globalism in spite of wide variation in sector, region, and role.

Designed to enable systematic comparisons, the research elicited few differences based on these dimensions of the sample design. Besides sharing the conception of a dynamically interlinked world economy, participants also hold in common the view that globalism's impact is strong and growing—and is not likely to diminish in the foreseeable future.

Human Resource Implications

To explore the human resource implications of globalism, we relied on several constructs and findings from previous research on education and the transition to work. Although much of that literature is based on precollege samples, it provided a useful approach to investigating the antecedent abilities and experiences that are thought to influence workplace outcomes. Additionally, it guided the analysis and interpretation of the quantitative and qualitative information we collected.

The data gathering procedures lead to mutually corroborative results. In brief, globalism has two chief effects:

- It intensifies, due to increased competition, the need for traditionally valued knowledge and skills.
- It creates a need for new knowledge and skills, termed here "crosscultural competence."

In the traditionally valued category, excellence in the major field of study receives considerable emphasis from both corporate and academic respondents. But although it is necessary for getting in the door of the corporations we studied, it does not guarantee success once there. Rather, a host of cognitive and social skills along with personal traits must be coupled with domain knowledge in the context of the workplace to generate effective performance. On-the-job training, internships, and domain-relevant work experiences are thus regarded as better predictors of real-world outcomes than subject-matter knowledge per se. These results are highly consistent with previous research on students making the transition from secondary school to work. They also corroborate the conceptual framework outlined in the Introduction, which suggests that cognitive and socioemotional attributes are closely interrelated in actual contexts of performance.

In view of these findings, it is surprising to learn how much weight is given to grade average in the academic major by the participants in this research. There are a number of likely explanations. On the academic side, field or discipline is

the main organizing principle, and domain excellence is the basis of the tenure and promotion system for faculty; individual achievement in the domain, similarly, is the way student performance is judged and reflected in the grade point average. On the corporate side, the hiring decision is almost invariably made by a line department head who came through the same disciplinary tradition. Department heads, to be sure, aim at enlisting employees with the right portfolio of domain knowledge and generic ability. But only the former is measurable. Consequently, in spite of the acknowledged value of cognitive, social, and personal skills—and in spite of their significantly higher importance ratings in standardized queries—domain knowledge as reflected in grade point averages earned in selected schools remains a primary driver of human resource decisions.

However, it is crosscultural competence—the new human resource requirement for corporations with a global business strategy—that is in shortest supply. We define this concept to include an understanding of globalism in the broad systemic sense, plus the personal traits, generic skills, and domain knowledge needed for applying it effectively in new contexts of the sort represented by globalism in the narrower sense. It should be emphasized that, as it is construed here, crosscultural competence involves both expanded knowledge and cultural sensitivity. Neither by itself is an adequate base for internationally competitive performance.

Across institutional settings, participants stressed the emerging role of crosscultural competence not just for successful job performance but also for being an informed citizen of a developed and diverse nation. Its significance is not, however, reflected in standardized importance ratings given to foreign language coursework, study-abroad experiences, and the like. That is because the way in which such programs are implemented has a dominant influence on their worth. Those that create "mini-Americas," or islands of cultural homogeneity abroad, do little to promote crosscultural competence; but those that integrate their participants into the local culture are highly valued. In the absence of such cultural understanding, language fluency per se is accorded much less importance. The review of prior literature that guided this study, it should be noted, gives a key role to implementation in interpreting program effects.

At present, according to both corporate and academic respondents, US colleges and universities are turning out job candidates with high levels of domain knowledge. But with respect to crosscultural competence, job candidates are much less well prepared. They are unlikely, for instance, to understand the international dimensions of their major academic field; and they probably have

not had a general education background that includes world history, geography, comparative political science, and so on. Moreover, they may have had no exposure to other cultures and languages. Compared to international students, US students are believed to be at a serious competitive disadvantage in the global labor market.

Although we cannot bound our conclusions about human resource needs with quantitative estimates, we believe that in corporations like those we studied, almost all technical, professional, and managerial jobs are likely to require—or at least benefit substantially from—crosscultural competence in the near future. Further, for corporations with a global strategy, the demand is unlikely to differ as a function of region or sector; and we would expect the demand to grow as more and more US firms position themselves for international competitiveness. Finally, relative to the expected demand, our research leads to the conclusion that the supply of crossculturally competent US job candidates is scarce. Both corporate and academic participants in the study see it as imperative to better prepare the US workforce of the future for success in a global economy.

Responding to the Challenge

The criteria for selecting organizations to participate in this research meant that they were all involved in responding to the human resource challenge presented by a globally competitive economy. Earlier sections describe their activities in considerable detail. Here we set out some of the key reasons the challenge is a difficult one.

It is still too early to assess the overall success of the various academic initiatives we encountered. Their number and innovative nature signal academia's serious commitment to meeting the human resource challenge. However, several factors adversely affect the ability of academic institutions to respond as well as they otherwise might.

Important deterrents to effective response are presented by the lack of financial and related resources to help universities implement change, plus the lack of effective mechanisms for reallocating existing resources within and across institutions. Both private- and public-sector institutions underscored these points. Economic constraints condition the ability of both firms and schools to take on new activities without the radical reallocation of existing resources.[1] However, the study suggests that pooling resources with other institutions—

[1]For a careful discussion of how educational governance structures impede effective resource reallocation within and across institutions, see Benjamin and Carroll (forthcoming in 1993).

businesses and/or other universities—is a promising approach to realizing a revised, internationalized education. As we have seen, corporations are beginning to demand different skills from the college graduates they hire. However, it is unrealistic to expect universities to cope with this added demand alone—and certainly not quickly. It would seem to be in the interests of both parties to pursue a cooperative approach to minimize false starts and wasted resources.

A second significant hurdle facing US academic institutions that are trying to devise an internationally competitive education for their students is the institutional promotion and tenure system. As it is currently structured, the reward system offers no incentive for faculty to change the ways they organize and teach their material. Advancement decisions are based almost exclusively on research/publication record and teaching evaluations. Thus it is hard to stimulate and encourage faculty to spend the considerable time and effort that would be required to internationalize their piece of the curriculum—especially when they are already heavily invested in their own research area. Until more weight is given in tenure and promotion decisions to activities other than research and publication—such as curriculum development, industrial participation, and so on—it is unlikely that faculty will embrace the challenge to do things differently.

The two problems described above are further exacerbated for universities as they try to set priorities in their educational efforts. On the one hand, they are asked to prepare graduates for positions in a globally competitive marketplace. On the other, they have to cope with decreasing skill levels among incoming high school graduates. Responding effectively to both demands is difficult for most academic respondents to imagine. Needless to say, not all schools are facing these problems; many have not yet observed skill declines in the incoming students they accept. However, even in these settings many are concerned that the supply-side problem—especially in technical and scientific areas—will soon begin to affect them as well.

Looking to corporate efforts to address the human resource challenge, it is evident that the US businesses in this study understand there are workforce effects of globalism and are undertaking varied initiatives in response. In this way, corporate findings parallel the academic findings from the research. However, although virtually all corporations could fully articulate the implications of increased global competitiveness for their firm's business strategy, not all were so clear about the human resource consequences. Thus most of the attention to new human resource requirements is focused on

recruitment or entry-level training and development; it is much less frequently reflected in longer-term human resource policies or planning.

Although good beginnings have been made, then, there are reasons for concern about how effective they will ultimately be. In many firms, human resource planning is likely to be isolated from and subordinate to strategic resource planning in other key areas—for instance, financial decisions, technology investments, research and development goals, and so on. Further, human resource representatives may not be included in the executive management level of the organization. More salient in this research was the relatively low status of the college recruitment function in some firms. This situation negatively affects the relationship between the corporation and college placement professionals in several ways.

First, because recruiters have little power to influence final hiring decisions (usually made by a line department head), they often cannot interview the more interesting kinds of job candidates—those who have pursued a nontraditional course. That behavior leads to frustration among stakeholders and decisionmakers in universities who are trying to provide more globally relevant education options and encourage students to take advantage of them. It also makes messages from business leaders about the need for a globally competent workforce sound hollow. In these cases, charges of globalism "hype" are well founded.

Another notable problem associated with the transitory nature of the college recruiter position is that career and placement advisers have little chance to develop ongoing relationships with them. Long-term relationships help each side cope with the uncertain economic climate's adverse effects on the hiring environment. As companies reduce their on-campus recruiting and face temporary hiring freezes, stable relationships between the corporate and academic human resource professionals become more critical. In the case where college placement officers know and appreciate the problems of recruiters over the longer term, they are more likely to work with them to ensure that the connection between the company and the university is not lost.

A second conclusion we draw from the corporate qualitative data is that, in general, human resource policies are not well aligned with business strategy. This is partly reflected in the disconnection between the goals articulated by senior management for a different type of workforce and actual recruiter behavior on campus. Another example of this misalignment, however, involves internal human resource practices concerning international assignments and subsequent career path development. Even some longstanding multinational

companies had policies that sent contradictory messages about the value of an international assignment in career terms.

For example, in some cases, there is little or no repatriation assistance offered to an employee returning to the United States from an overseas assignment. Further—particularly if the assignment had been a long one—companies often have no policy about what to do with the person once he or she is working back in the United States, with the result that the international experience is not well used as a resource. Many interviewees acknowledged the problem of determining an appropriate reentry position for that person and what their subsequent career path in the firm should be. Such individuals are frequently left feeling disenfranchised by the whole experience. A much more viable approach for companies would be to recognize employees who had worked overseas as resources rather than problems. Much as the educational value of international students on campus is often ignored, so too is the expertise of internationally experienced employees often underutilized.

Coping successfully with the human resource challenges of globalism will be difficult, for reasons outlined above. The recommendations that follow represent an attempt to make the lessons we have learned from the participants in this research more helpful to others facing similar issues.

Recommendations

The first recommendation coming from this research is that corporations and educational institutions should assume joint responsibility for co-producing a globally competent workforce. They have stronger mutual incentives to do so than in the past. Previous US experiences with industry-university cooperation were aimed at improving and speeding industry's ability to move the results of basic research into commercial products and processes; but evaluations of those efforts show that universities benefited from the interaction at least as much as their corporate partners did.

As preceding parts of this report make clear, there are a number of unresolved tensions between corporate and academic communities. Some are well founded. For instance, it is difficult to assess the extent to which educational missions may be compromised by working more closely with industry. Likewise, it is hard to estimate how much corporations can expect to gain from investments in higher education in comparison, for example, with investments in internal training efforts or international recruitment.

Nonetheless, the range of collaborative activities that surfaced in the course of the study suggests that the mutual advantages can be significant. Further, on the basis of what we learned from representatives of corporate and academic communities, some next steps toward cooperation can be recommended.

- First, corporate and academic stakeholders should engage in an effective dialog to define and prioritize future human resource needs in mutually clear terms. Our research provides evidence that these groups often misunderstand each other.
- Second, firms and schools should explore an extensive range of collaborative options for meeting mutually identified needs. A variety of models will be needed to suit differing organizational and institutional sizes, structures, cultures, goals, and resources.
- Third, these communities should create the means to share results broadly and to develop coordinated policies where feasible. The large-scale, interinstitutional relationships we encountered in this research are regarded as highly promising.
- Last, attempts to build new collaborative ventures are advised to pay careful attention to their implementation. Corroborating the findings of previous research on organizational change, our study suggests that the difference between lip service and real results lies in the implementation process.

Besides recommendations for action, this study also yields several recommendations for future research. As we explained, the chief objectives of this project were exploratory. It leaves a great many questions unanswered. Among them, the following are recommended for pursuit in the near term.

- What is the real scope of globalism, in quantitative terms, in the US economy? Can we measure the ways in which the interlinked world economy is affecting US business?
- How much priority should colleges and universities give to developing global knowledge and skill in their students—especially given other pressing demands and shrinking financial resources?
- How should apparent discrepancies between human resource practices and broader business strategies in US firms be interpreted? What incentives are there for human resource investments, compared to other investments they might make?

- What institutional frameworks will best serve to support cooperation between corporate and academic communities? Given the ambivalent response both parties have to government involvement, what policy initiatives—if any—are desirable?

Currently, individual organizations are taking steps on their own to address a significant societal challenge. The action and research recommendations set out here are intended to distribute more widely the burdens—and the benefits—of understanding and responding to the human resource issues engendered by a global economy.

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