



**Labor-Market Linkages Among Two-Year College
Faculty and Their Impact on Student Perceptions,
Efforts, and College Persistence**

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Abstract

While social scientists have long emphasized the mutual influences of schools and society, the mechanisms underlying these relationships have largely remained a mystery. Moreover, some research has found that two key parties in this relationship, teachers and employers, are largely suspicious of each other and may be reluctant to leave their respective domains to interact with the other. This paper seeks to examine an important class of exceptions: two-year college faculty who go beyond formal job duties to interact with employers in order to facilitate students' labor market transitions. Using data from a sample of 41 faculty members at 14 public and proprietary two-year colleges, we examine which instructors develop linkages with employers; what actions they take; why they take these actions; in what institutional contexts they do so; and what factors encourage or discourage their actions. Then, using a survey of nearly 4,400 students at 14 two-year colleges, we examine students' perceptions of teacher and college contacts, and whether these perceptions influence students' effort at school and their consideration of dropping out of college. Combining qualitative and quantitative analyses, this study suggests that colleges may help students not only by instructional activities, but also by fostering labor market contacts.

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BACKGROUND

Schools are the main societal institutions for preparing young people to enter productive roles in society. Human capital and functionalist theories assume that schools respond to labor market needs, and many scholars make that assumption. Even radicals who disparage such responsiveness believe that it occurs (Bowles and Gintis, 1976). Nonetheless, at the high school level, research has produced little evidence to indicate how this correspondence might take place. Indeed, until recently, the general observation has been that high schools and employers do not have much to do with each other (Lortie, 1975; Useem, 1986). Lortie (1975) notes that the teaching role is characterized by its containment within individual classrooms, with no expectation of action outside the school. Studying high school staff and employers, Useem (1986) finds great suspicion of each toward the other, and a reluctance to trust each other or to interact. Moreover, many studies find that recent high school graduates with higher achievement do not get better jobs and pay than lower achieving graduates, implying that employers do not have much regard for high school achievement (Gamoran, 1994; Griffin, Kalleberg, and Alexander, 1981; Miller, 1998; Murnane, Willett, and Levy, 1995).

More recently, national school-to-work legislation, like the Carl D. Perkins Vocational and Applied Technology Act, has prompted many reforms. This has yielded some exciting experiments in work-based learning around the nation, yet these are still small-scale efforts, and “work-based learning at the secondary school level has remained a marginal academic strategy” (Bailey, Hughes and Moore, 2004, p. 3). A 1997 national survey of employers indicates that 39% of for-profit businesses with more than 20 employees were participating in some form of work-based learning (Cappelli, Shapiro,

and Shumanis, 1998). Whether these findings from the strong labor market of the late 1990s represent a serious enduring commitment or a transitory response to new reforms remains to be seen. Indeed, recent studies have described parents, teachers, and counselors as significant obstacles to improved workplace learning (Hughes, 1998, p. 5; Bailey et al., 2004, p. 90) suggesting that, even if employers are interested in school-work linkages, high school staff may not be responding.

Moreover, it is disappointing that these programs rarely help students get jobs after graduation. Many high school career programs focus on encouraging students to attend college (Stern, Finkelstein, Stone, Latting, and Dornsife, 1995), and do not use employer contacts for job placement of recent graduates. At the same time, employers may offer workplace learning for altruistic or public relations purposes, rather than to recruit new employees; so it is not clear that these experiences offer students much hope that they will be able to get good jobs with their employer or others (Bailey et al., 2004; Mickelson and Walker, 1997).

Systematic information about school-employer contacts can be difficult to obtain, as these linkages may rely on informal arrangements between individual teachers and employers (Brewer and Gray, 1999). Moreover, many of the best national longitudinal studies of students (e.g., NELS, NLSY, PSID) and the best studies of employers (Neckerman and Kirschenman, 1991; Holzer, 1995; Moss and Tilly, 2001) offer poor information about school job placement assistance. However, analyses of one national survey of students (HSB:82) found that among students with no college degrees, high school job placement led to 17% higher earnings ten years after high school graduation (compared to students' directly applying to employers), and about twice the return of

getting jobs through relatives (Rosenbaum, 2001, chapter nine). Although school contacts that lead to job placement are rarely advocated or studied, they can have a powerful impact on students' careers.

If schools or faculty have employer contacts that can help students get good jobs, they might also have benefits for student motivation in school (Hamilton and Hurrelman, 1004). Studies find that many students believe that high school is irrelevant (Stinchcombe, 1964; Steinberg, 1996; Rosenbaum, 2001), and reformers call for practices that enhance the relevance of education to employment. However, even these responses have rarely included employers. Many reforms integrate occupational content into the curriculum, without building linkages to employers (Grubb, 1996; Stern et al., 1995). Indeed, a great deal of uncertainty remains about the specific behaviors and practices that support relationships between education and employers, much less how these contacts affect students.

Nearly 70% of high school graduates now attend college at some point, so the issues surrounding the school-work transition have moved up into colleges. Focusing on two-year colleges, Grubb (1996) emphasizes the centrality of "mid-skilled" labor to the US economy, noting that the sub-baccalaureate labor market includes over three-fifths of all workers. Further, he notes that the highest job-growth rates are projected for sub-baccalaureate positions like technicians and support staff, especially in areas such as health and information technology. As such, two-year colleges play a critical role in the nation's workforce development and can provide a particularly rich source of data on education-employment connections.

If the benefits of sub-baccalaureate education for both employers and employees

are to be realized in the labor market, Grubb notes, it is important that students find work in the field they have studied. Finding such work requires good information, which, Grubb asserts, is especially hard to get in the sub-baccalaureate labor market. Given such imperfect information, Grubb identifies colleges' institutional relationships with employers as a critical component in the labor market success of their students. Yet he cites the "sluggish responsiveness of many educational institutions to shifting [labor market] demand" as a major hurdle that community colleges need to overcome in order to enhance their graduates' labor market outcomes (p. 4). Dougherty (1994) arrives at the same conclusion, arguing that "the community college indeed dances to the rhythms of the labor market, but it rarely keeps very good time" (p. 67). The implication is that community colleges are, at least to some extent, missing the mark in supporting their students' labor market success.

While Grubb's and Dougherty's analyses focus on the institution, Brewer and Gray (1999) examine college-employer relationships at the individual level with their study of labor market linkage activities by community college faculty. The authors' systematic analysis of the type and extent of employer linkages, however, yields anything but systematic results. On the contrary, Brewer and Gray conclude that linking activities "were often ad hoc and informal in nature" (p. 415). Bailey, Badway, and Gumport (2002) echo this sentiment in their analysis of public and proprietary colleges, calling job placement at community colleges a "haphazard process... based on a case by case system of individual faculty or staff using employment relationships for the students in their programs" (pp. 34-35).

Grubb and Brewer and Gray also identify institutional barriers to community

colleges' links to labor markets. Among other obstacles, the authors point to a lack of resources and institutional support for linking activities, as well as departmental isolation within colleges that impedes the flow of information. Grubb optimistically asserts that linkages can be improved, yet Brewer and Gray note the general weakness of conceptual foundations and lack of empirical evidence for how linking actually occurs. This fact may underlie Grubb's insistence that "there is no substitute for individual community colleges examining the practices linking them to employers" (p. 173). While the authors correctly describe and diagnose many of the problems related to two-year college labor-market connections, and while they offer some solutions, their analysis remains at the aggregate level. Even Brewer and Gray and Bailey et al., who use interviews and case studies as part of their analyses, present findings that speak primarily to the issue of colleges and instructors on average. While this analytical approach is certainly useful, it fails to shed light on the processes by which two-year college faculty actually make and maintain labor market connections, or the variation within the averages. We know very little about how or why some faculty manage to overcome institutional barriers and attend to relationships with employers. As such, those linkages that do exist are inevitably viewed as random, the serendipitous result of particular individuals acting in specific contexts.

Several theoretical premises have guided thinking about faculty-employer relationships. Both human capital and social capital perspectives view school contacts with employers as serving the critical function of conveying information between employers and students (i.e., prospective employees). Signaling theory (Rosenbaum, Kariya, Settersten, & Maier, 1990) provides the most direct discussion of the role of school staff in this process. Similarly, sociological theory (Meyer, 1977) suggests that

institutions can have recognized charters that enhance school staff's effectiveness in providing authoritative information about students. Indeed, institutions may use industry contacts to improve the correspondence between their curricula and the demands of the labor market (Rosenbaum et al., 1990) and possibly build their own charters (Deil-Amen and Rosenbaum 2004). More recent research finds that high-school faculty sometimes send employers trusted signals—authoritative information about the level of students' knowledge and skills necessary for employment (Rosenbaum, 2001). Moreover, as noted above, students getting jobs through teachers' contacts have significantly higher earnings than those getting jobs through family contacts (Rosenbaum, 2001).

Beyond the actual job benefits of school-employer contacts (i.e., employment and wages), however, few scholars have considered the more immediate effects of such linkages on students who are still in school. Stern et al. (1995) do focus on high-school outcomes (e.g., achievement, attendance, drop-out) among students in academies combining academic and vocational curricula. But they do not point to the schools' or instructors' labor-market linkages as a potential factor influencing students' positive outcomes.

The present study uses qualitative and quantitative data to examine two-year college faculty's connections with employers and the impact of these connections on students. First, through interviews with 41 college instructors (who are also occupational program chairs), we identify the behaviors and practices of two-year college faculty in creating labor market linkages. Whereas Bailey (Bailey et al., 2002) and his colleagues focus on averages, the current study seeks to determine which programs are marked by what processes, and how instructors capitalize on contextual supports and/or overcome

obstacles to develop labor-market ties. In identifying the common characteristics of instructors, programs, and institutions that emerge as patterns in what might otherwise appear to be “haphazard” practices, this paper may also inform educators and policy makers as to what structures and practices promote successful labor market linkages. The second source of data, a survey of nearly 4,400 students at 14 two-year colleges, allows us to examine students’ perceptions of teacher and college contacts, and whether these perceptions influence students’ efforts and their consideration of dropping out of college. Combining qualitative and quantitative analyses, this study suggests that rather than focus solely on instructional activities, community colleges may also help students by fostering labor market contacts.

RESEARCH DESIGN AND SAMPLE

This paper draws from a larger study on the school-to-work transition among two-year college students in occupational programs. The broader study includes not only the program chair interviews and large student survey (detailed below and analyzed here), but also interviews with an additional 55 college administrators and staff, as well as nearly 100 students. Prior articles drawing from the study have examined colleges’ institutional prerequisites for and provision of cultural capital (Deil-Amen and Rosenbaum, 2002); college information channels (Person, Rosenbaum, and Deil-Amen, forthcoming); and institutional charters as a mechanism in the college-to-work transition (Deil-Amen and Rosenbaum, 2004). This study explores teacher-employer contacts and such contacts’ effects on students.

Our sample includes seven public community colleges and seven private

occupational colleges. Four of the seven occupational colleges are for-profit; the other three are non-profit. All schools are located in a large Midwestern city and its surrounding suburbs. While the vast majority of two-year college students enroll at public community colleges, private sub-baccalaureate institutions often focus specifically on career training and, therefore, might approach employer contacts very differently from the community colleges in our sample, which historically have been transfer-oriented. Moreover, some of the larger private colleges, in particular, emphasize job placement heavily in their advertising and recruiting materials, indicating a distinct focus on labor markets. Finally, the public/private debate surrounding high schools suggests that private colleges might also be more effective in some respects, and an old study by Wilms (1974) supports that conclusion.

In order to compare comparable institutions, we chose a group of private colleges offering *accredited* associate's degrees of similar quality and in the same occupational fields as our community colleges. These schools are unlike the more common "trade schools" (found in most large cities and widely advertised in local media), which offer occupational education, but are not accredited to offer degrees beyond the certificate level. Nationally, only 4 percent of two-year college enrollments are in private colleges, and only 6 percent of private colleges offer associate's degrees (Bailey, Badway, and Gumport 2002). As such, these occupational colleges are comparable to community colleges, but dissimilar to 94 percent of for-profit schools, which offer no degree above a certificate (Apling 1993).

Of course, occupational colleges have some disadvantages. They are smaller than community colleges and offer fewer programs and a more limited general education

curriculum. They are less devoted to the preparation of students as informed and cultured citizens because of their focus on occupational preparation, and the faculty composition reflects this organizational mission, with a majority of the faculty composed of adjuncts with extensive professional experience in the fields they are teaching. In addition, these schools require students to declare their program at entry. Career exploration is severely limited, generally within the confines of an occupational field. Changes of major are possible, but may lengthen the time it takes to complete a degree. Transfers to bachelor's degree programs are possible, but usually only to certain programs and colleges.

Receiving no public subsidy, these private schools have much higher tuitions than do community colleges, but loans and grants permit low-income students to afford them, since they are extremely proficient in helping students navigate the onerous financial aid process. Because their students graduate more quickly and get skill-relevant jobs, one analyst concluded that these schools may be as cost-effective as low-tuition community colleges (Wilms 1975), but the issue has not been examined recently.

We do not infer that private colleges are better than public ones or that they should replace them (which is inconceivable, given their small number). Not only did we select an unusual group of private colleges (which met the same accreditation standards as community colleges), but our topic does not illustrate some of the public colleges' strengths: low tuition, small classes, dedicated instructors, a variety of course offerings, flexibility of scheduling, and so forth. Although we are impressed with many aspects of community colleges, this article considers their handling of labor-market contacts in *occupational programs*—a situation that raises some concerns.

Despite differences in sources of funding, levels of tuition, and size, the two types

of colleges have many similarities. Compared to other colleges, both are regarded as relatively low-status institutions, have lower admissions requirements, offer lower-status degrees, and have relatively few graduates who attain four-year degrees. Both have many students from lower- or working-class backgrounds (Dougherty 1994; Grubb 1996).

Students enter both types of colleges seeking access to jobs in the primary labor market, and our survey of nearly 4,400 students in these colleges confirmed the findings of prior research (Grubb 1996) that students in both types of college are from similar low social and economic backgrounds, have low high school achievement, and have similar goals.

All 14 schools were systematically selected, based on the comparability of their occupational programs, including fields such as business, accounting, computer information systems and networking, computer aided drafting, court reporting and paralegal, office technology, electronics, engineering, and a variety of health technician programs.

All 14 colleges have large proportions of low-income and racial minority students, as well as students with low high-school achievement. While one might expect the private colleges' higher tuition rates to draw students from more advantaged backgrounds, these occupational colleges aggressively utilize state and federal funding for students, so that they actually enroll the same kinds of working-class students as community colleges (Deil-Amen and Rosenbaum, 2003). Indeed, analyses of national data show that for-profit degree-granting institutions enroll and graduate greater proportions of disadvantaged college students than their public counterparts (Bailey, et al., 2002; Jenkins, 2002).

The two types of college in our sample differ in another important respect: The

community colleges are, on average, much larger than the occupational colleges. The total fall 2003 enrollments for the community colleges in our sample range from about 8,000 to about 15,000 students, whereas the occupational colleges vary a great deal more, enrolling from about 500 students at our smallest college to over 5,000 at the largest. The difference is less stark when considering only full-time students, of which the community colleges average about 3000, and the privates enroll an average of just under 1,800 (Illinois Board of Higher Education, 2004).

We certainly recognize the potentially important influence of college size for the analyses discussed in this paper. Still, we feel that our qualitative focus may actually shed light on what aspects of size are important with respect to questions about linking between colleges and labor markets.

As with most qualitative studies, we cannot prove the typicality of our cases. In particular, doubts could be raised about the transfer emphasis in our seven community colleges, especially given Brint and Karabel's (1989) finding that occupational goals dominate the stated missions of community colleges. Yet our community colleges are similar to others on this issue: 50% of the students in our community colleges are enrolled in transfer programs, and the average for the entire state is also 50% (Illinois Board of Higher Education 2002, Table VI-2). Moreover, our findings are compatible with other studies (Brewer & Gray, 1999; Cross and Fideler, 1989), which have found that community college administrators and faculty are nearly evenly split in their ranking of transfer (general education) and workplace preparation as the top institutional priorities. Our community colleges seem typical on this key issue. In contrast, our occupational colleges are *not* typical. Only 6% of private for-profit colleges are

accredited to offer associate's degrees (Apling, 1993). Rather than being a random sample, our occupational colleges offer some of the best programs in these occupational fields, and may be considered to represent an ideal type. As such, these colleges provide a different perspective on how two-year colleges can operate, versus what one can observe in community colleges.

While we have heard reports of a few exemplary community college programs that focus on occupational preparation and engage in practices similar to the occupational colleges studied here, these exemplary colleges do not seem to be typical in national surveys (Brewer & Gray, 1999). Even Brint and Karabel's (1989) finding of employer emphasis seems to be more about image than actual connections, since they note "the curious lack of interest of 'career oriented' community colleges in developing ties with local employers or studying their skill needs" (Brint, 2003, p. 25). As we see it, the value of comparing occupational programs at "typical" community colleges with similar programs at "ideal" occupational colleges is that the comparison can shed light on a few specific practices that might be implemented on a broader scale to improve outcomes among students seeking occupational preparation.

Although the public colleges in our sample offer a much greater variety of majors and courses than the private colleges (which focus strictly on occupational programs), this study focuses only on occupational programs at the two types of college. These programs are in the same fields and prepare students for the same kinds of jobs, so they are likely to offer the same skills and recruit students with similar goals and motivations.

As noted, this paper presents the results of two studies. The first study is qualitative. Over a two-year period (2000-02), the research team interviewed 41

instructors at the 14 colleges in our sample. All of these instructors also served as chairs for their occupational programs. This focus permits comparability with past research, which has looked primarily at the role of instructors in creating and maintaining labor market linkages. At the same time, as the individuals responsible for a given program, chairs are apt to serve as a first point of contact for employers. Similarly, to the extent that programs must keep records or produce reports on their students' outcomes (especially in the labor market), the duty usually falls to the chair. Finally, program chairs are also likely to know a great deal about their program's history and continuing development, even as they have close contact with students through teaching. While we cannot assess the extent to which these 41 respondents are representative of two-year college faculty or program chairs, these respondents offer a particularly rich source of information on what faculty-employer contacts exist and what processes underlie them.

Table 1 describes the program chair interview sample.

Table 1: Description of program chair interview sample

Program	Total	CC	OC
Business & Management	9	6	3
Health	7	5	2
Computer	7	5	2
Electronics & Engineering Tech.	6	2	4
Design (CAD, architecture, etc.)	4	2	2
Accounting	3	3	0
Paralegal/Court Reporter	2	0	2
Office Admin./Secretarial	2	2	0
Environmental Tech.	1	1	0
Column Total	41	26	15

Source: Authors' data.

QUALITATIVE METHODS AND ANALYSIS

Interviews were semi-structured, asking all respondents a core set of questions about their work. Broad themes included college and departmental organization, curricular development, student performance, and the job market for graduates. More specific areas important to the current analysis dealt with employer influence on the curriculum, formal and informal communication with industry representatives, job placement activities, and instructor involvement in the field outside the classroom. The semi-structured interviews also allowed for elaboration of particular points that an individual might raise. Through the interviews, we were able to ascertain faculty actions, motivations, and the institutional and organizational practices that might enhance or inhibit labor market linking activity. Interviews lasted one to two hours and were taped and transcribed verbatim.

While personality characteristics may have some influence on instructors' choices to make and maintain labor market linkages, we identify distinct practices at an institutional level that shape individual behaviors. For instance, every occupational college we studied made explicit promises to help students find jobs and collected systematic data on graduates' jobs, while none of the community colleges we studied systematically did so (Deil-Amen and Rosenbaum, 2004). Such institutional practices may have an impact on faculty actions, regardless of instructor personality. Moreover, from a policy perspective, institutional structures and practices are certainly a more appropriate target of policy intervention than individual traits.

In coding transcript data, we began with deductive coding of responses to specific questions about labor market linkage activities. These included questions about the

instructors' own activities, institutional linking activities, and their perceptions of students' typical ways of finding jobs. At the same time, we conducted open coding of broad employment-related themes, like labor market influences on the curriculum, demand for employees in a given area, and so on. Later, we re-analyzed the data, coding more specifically for those themes that had emerged as important across cases. Some of these included, for example, institutional and individual "calling," both of which provide some insight into the reasons why individual instructors create and maintain links with the labor market.

Levels of Linkage Activity

While prior studies have appropriately emphasized faculty's modest average involvement with employers, this study examines the nature of linkages that are forged, with special focus on institutional contexts. We discovered that these program chairs differed in their level of linking activity, and they could be described by three categories: high linking, moderate linking, and minimal linking. These categories indicate the amount and intensity of their involvement in linking activities, as well as their stance toward active versus passive linking activities. A brief explanation of each level appears below, using a typical case for each level. For the sake of consistency, all of the examples are from the same occupational field, computer information systems (CIS), and all are from community colleges:

Minimal linking activity: The only linking activity NJ (all initials are pseudonyms) describes in the interview is his personal interaction with colleagues in the CIS field. He reports, however, that he doesn't often use these contacts to get students jobs. He explains, "People who are looking for students usually go to the four-year

schools first. If they don't find somebody there, they'll try to find somebody in-house who could be promoted into that. They don't often come here. Or if they do, they come here with unrealistic expectations." Asked about his department's advisory committee (i.e., an outside board with the purpose of advising the department with regard to labor market needs in their field), he states, "Had one a few years ago. I am now told that I will have one again... An advisory council [would] just be five of my best friends. You know, director of programming here—that kind of thing—manager of software support. Just go, call five of my friends, and we'll have a lunch somewhere." Throughout the interview, NJ expresses some suspicion about the value of contacts with employers, and his reported actions reflect this ambiguity.

Moderate linking activity: RM is the CIS chair at a different community college. She describes her work with the department's advisory committee explicitly in terms of their usefulness as a potential source of jobs for students. She also notes that adjunct faculty in her department, who continue to work in the field, sometimes have job opportunities from their places of employment, and that, "they share that with me." She continues, "... and I do get a lot of calls from companies in the district that they're looking for help-desk people, support people, whatever." Note that she engages in several different types of labor market linking, but she most often receives information from contacts who approach her, rather than taking the initiative herself to foster contacts.

High linking activity: Like RM above, DL speaks of adjunct faculty as an important source of information about jobs and the labor market. Rather than waiting for them to come to her, however, she reports making efforts to stay in constant communication with them. In addition to finding faculty with industry experience to

teach courses, DL reports, “I see my job as not only hiring these people, but also going out to industry, and not just having a meeting yearly with the new advisory committee, [but] actively being out there and seeing what they want.” In addition to working with adjunct faculty, the advisory committee, and people in industry, DL also conducts surveys of her program’s graduates to see how they have fared in the labor market, as well as surveys of employers who have hired her students to assess whether or not they are meeting employer expectations.

FINDINGS

As the literature indicates, there is, indeed, a certain “ad hoc” element to faculty efforts to make labor market connections. But faculty behaviors appear to be more patterned and more nuanced than surveys indicate. Indeed, qualitative evidence reveals that certain institutional structures and practices may contribute to the level of faculty effort directed toward building and maintaining links with potential employers. These include both structures and practices of the college itself, as well as the infrastructures of professions with which programs are associated.

Institutional Structures and Practices at Community and Occupational Colleges

Resource constraints: Beyond a particular instructor and program in question, colleges themselves can play an important role in fostering as well as hindering faculty labor market linkages via their own institutional structures and practices. Perhaps the most commonly cited institutional barrier to instructors reaching out to employers is the resource constraint faced by so many educational institutions (Grubb, 1996). Instructors in our sample, too, reported that resource constraints—especially on time—prohibit, or at

least inhibit, linking activity. On the other hand, some forms of fiscal constraints do not appear to be as problematic. All but one of those faculty members who sought reimbursement for linking activities (e.g., participating in professional meetings, invited talks, etc.) reported that funds were readily available. On the other hand, it is still possible that some faculty would not seek financial support for linking activities because they believe it would be a fruitless endeavor. Or perhaps more importantly, if financial resources were more available, more administrators and/or support staff could be hired and faculty would be less pressed for time. Indeed, hiring faculty (which could, for example, be handled with the help of human resources administrators) and administrative paperwork (which could be handled with the help of support staff) were two of the time burdens mentioned most frequently by department chairs.

Adjunct and part-time faculty: A similar result of institutional resource constraints that we observed at most of the colleges in our sample is the trend away from hiring full-time, tenure-track faculty in favor of part-time and adjunct instructors. Interestingly, this trend appears to support employer linkages on the one hand, yet impede them on the other. Among computer-oriented programs in particular (e.g., computer information systems (CIS), information technology (IT), Network Specialist, etc.), chairs frequently cited their own and other faculty's work in their field as a source of labor market connections that could benefit entire programs and individual students alike. Chairs explained how they may update program curricula based on input from faculty working in the field; and individual students sometimes get jobs directly through such connections. Still, not all program chairs view such involvement as beneficial. Certainly, as one IT chair puts it, "part-time faculty enhance the program because they're

out there doing what it is that they're teaching." On the other hand, another CIS chair laments that, "[t]he loss of four full-time teachers is a major loss to the department... I can't improve my program with part-timers." Only two program chairs, both at community colleges, spoke in explicitly negative tones of part-timers and adjuncts. In both these cases, the chairs felt that the time required for finding and hiring faculty impinged upon their other activities, including making employer contacts. The instructor cited immediately above also reported that high turn-over among part-time and adjunct faculty resulted in curricular discontinuity.

Division of labor: A final category of institutional supports for and obstacles to linkages is bureaucratic in nature. The division of labor within the colleges often assigns contact with employers to a specific person or unit. Most prominently in our broader sample of college staff, representatives of career services offices were likely to report making employer contacts as a contractual obligation. Similarly, department and program chairs often named a specific person—usually the coordinator of internship or externship programs—as the person formally charged with forging employer linkages. The benefit of this type of division of labor is that contacts are institutionalized and more likely to be sustained, despite staff turn-over and/or changes in local job markets. It may also be easier for faculty to assist students who seek information about jobs when they can direct them to an individual who is formally responsible for such information.

On the other hand, bureaucratic structures tend to isolate departments and individuals with specific functions. In the presence of career services and internship coordination structures, faculty can easily dismiss their own potential role in connecting with the labor market, as such connections are formally defined as someone else's job. In

fact, of the 12 instructors coded as low for linking activities, six suggested career services as the appropriate place for making connections with employers, including four who offered this as a response when we asked them specifically for *their own* linking activities. Even so, among these instructors, their level of faith in the function of career services varied widely. An office administration technology (OAT) chair was enthusiastic, reporting, “I always try to connect [students] with career services;” while a CIS chair was more blasé, stating, “I assume that [students] will go to, at some time, the... job placement office.” We by no means interpret this evidence to mean that career services offices are not useful to institutions or students. Rather, we only note that the presence of such offices may discourage some faculty from considering work on employer linkages to be their own responsibility.

Differences in Institutional Structures and Practices at the Two Types of College

Interdepartmental communication: Although the institutional issues identified up to this point applied more or less equally to both the community colleges and the occupational colleges in the sample, there were also institutional factors that affected faculty linking activities differently across the two college types. The most prominent difference between the community colleges and their occupational counterparts was the nature of faculty interactions with career services and advisory committees. The CIS chair cited above, who “assumes” students will eventually find their way to career services is somewhat typical for the community college faculty, in that he does not appear to know exactly what services are provided (e.g., “job placement,” as he calls the office, is not offered); nor does he consider it his business to know. At the occupational colleges in our sample, bureaucratic division did result in a few program chairs citing

career services or internship coordinators as the people in charge of making contacts with the job market. Nevertheless, these individuals were aware of precisely who could provide a student with information on jobs or internships, as well as the nature of the services these individuals or offices could provide. As we previously noted, college size may influence intra- and interdepartmental communication; still it is noteworthy that faculty at one of our largest private colleges were among the very best informed about other divisions' labor market connections.

Advisory committees: As noted previously, advisory committees consist of representatives from local labor markets who work with college officials to assure that colleges (and especially occupational departments) are in tune with the demands of the field, from both the technical and labor-supply perspectives. Most of the colleges in our sample have some formal requirement regarding advisory committees.

Community college program chairs report a wide range of involvement with respect to advisory committees: from the CIS chair cited earlier, who has no interaction with the group, and who would be satisfied with a committee of “five friends having lunch;” to a Management chair who considers the committee her primary connection to the corporate world, meeting with them frequently, and relying heavily on their input in devising the curriculum. In contrast, the program chairs from occupational colleges were more uniform in reporting frequent and meaningful involvement with their advisory committees. Indeed, in our occupational college sample, even the least active program chair meets with his advisory committee between two and four times each year.

Bureaucratic hurdles and curricular development: Since the occupational colleges are private institutions, the process of applying the information garnered from

advisory committees and other sources to enhance the curriculum is much more streamlined than at the community colleges in our sample. Community college faculty describe cumbersome bureaucratic processes of curricular innovation. “You gotta jump through a lot of hoops,” says one Business chair, in a statement typical of the community college faculty. A Business chair at an occupational college describes a very different process, typical of his counterparts at the occupational schools: “We move so quickly—with almost no bureaucracy—that if I want to make a change, we make it.”

Institutional history and mission: The two types of college have very different histories and mandates: While community colleges are changing, they have traditionally emphasized general education and transfer to four-year colleges, whereas occupational colleges have emphasized more specific workforce training. Indeed, our interview data show that the faculty at the two college types articulate very different institutional missions. Community college faculty discuss their mission as broad and holistic, using terms like “developmental,” and “life-long learning.” As one community college department chair explains, “with our mission, really, you’ve got to serve everybody’s needs. That’s the function of a community college, [to] deal with all the different needs.” In contrast, occupational college faculty see their school’s mission as more narrow, focusing on career preparation and entry into suitable skilled jobs. They use terms like “applied,” and “career-oriented,” to describe their missions. As one chair succinctly puts it, “our mission is to serve students, so that they [have] an opportunity to be successful in a career.”

The different institutional contexts provided by the community and occupational colleges suggest that instructors at the private schools might be more apt to engage in

higher levels of linking activity. Table 2 offers some support for that contention, although the difference is not overwhelming. Less than half (46%) of community college instructors were coded as engaging in high levels of linking activity, and about a third were coded as engaging in only minimal linking. At the occupational colleges, 60% of instructors were found to engage in high levels of linking, while just 20% were at the low end. (Note that coding was conducted without explicit information on the respondent's department or college, although this information was often revealed in the transcript.)

Table 2: Level of linking activity by college type

Level of Linking	CC	OC
Minimal	35% (9)	20% (3)
Moderate	19% (5)	20% (3)
High	46% (12)	60% (9)
Total N	26	15

Source: Authors' data. Actual N appears in parentheses.

The four factors cited above as shaping linking activities differently at the two college types suggest that community college instructors will tend to have weaker contacts with employers. Yet this outcome is not inevitable. Indeed, one could easily imagine community college reforms that would alter any of these four factors (interdepartmental relations, advisory committee requirements, bureaucratic responsiveness, institutional mandates), which could lead to greater faculty-employer linkages. Indeed, community colleges relying on federal Perkins funding are required to be responsive to labor markets. In our sample, however, we saw these distinctions clearly between the college types. Moreover, by describing the contextual factors that appear to influence labor

market linking the most, we offer some insight into the barriers and supports that faculty at both types of colleges might face.

Nonetheless, college structure is not the sole determinant of outcomes. While the community college faculty in our sample report less high-level linking and more minimal linking with employers, it is noteworthy that in community colleges almost half (12 of 26) of the occupational program chairs engage in a high level of linkage activity. From what we can tell, this activity was not encouraged structurally by the institution. Still, some faculty members engaged in linking activity because they felt it contributed to their program and benefited students. At the same time, however, our data show that linking activity may also be supported by institutional structures outside the college, namely the professional associations affiliated with some of the instructors' fields.

Professional Associations

In sociology, professions are defined as exclusive fields that both create abstract knowledge and apply it to particular cases (Abbott, 1988; Perlstadt, 1998). Classic examples of traditional professions include medicine and law. Their "exclusivity" is a result of both high educational qualifications and endorsement requirements that are stipulated and controlled by a governing body, usually a professional association (Perlstadt, 1998). Such regulation of membership leads to shared knowledge and activities, which could be considered a shared professional culture, and may encourage a sense of "calling" among members. Accordingly, faculty reports suggest that the characteristics of professions that are especially pertinent to faculty labor market linkages include the rules and regulations governing membership and established membership networks.

In many occupations, professional associations are highly active, with numerous committees and regular meetings that provide opportunities for members of the profession to interact. The chair of the Physical Therapy Assistant program at a community college in our sample offers her explanation: “As faculty, we’re responsible for maintaining currency in our field... you read the publications, you read the journals, go to professional development course work. We attend state and international meetings... And so we keep up with those kinds of things.” Professional associations foster both social and work-related interactions among members. Asked how students get jobs, an Architecture instructor’s response hints at the importance of such organizations: “Well, you tie into the *network*, the *architectural community*” (our emphasis). Echoing this view, the chair of Occupational Therapy (OT) at one community college notes that employers prefer to deal with the department directly, rather than contacting the college’s career services office, because members of the profession know each other. She notes, “They would call the program. The *OT community* is not that large” (our emphasis).

Although state licensing may require a certain degree of involvement with professional associations in some fields (as, for example, in the case of most health technician programs) we see the same kind of activities for paralegal and accounting programs, where active professional associations provide program legitimacy and employer contacts. Interestingly, the implications of college program association with a profession are important for instructors in both an individual sense and a structural sense. With respect to the individual instructor, membership in a profession leads to personal identification with that profession; and at the same time, membership fosters networking activity with colleagues in the profession. The chair of the paralegal program at a private

college offers a rich explanation of the relationship:

I do a lot of networking. I'm very involved in the [County] Bar Association... I go to some [City] Bar Association committee meetings. I try and network with attorneys whenever I can... Those are employers for paralegals. I'm on the publications board for the [County] Bar Association... I'm on the Labor and Employment Committee for [the bar association], I'm also on [several bar association committees]... so I try and meet as many lawyers as I can, consistent with my academic load.

Asked whether such activities are part of his job description, this program chair hesitates:

"I don't know how to answer that question... It's something I feel I need to do if I'm going to publicize the program." This instructor seems to be motivated by a personal sense of responsibility to the program in his charge. Moreover, he clearly identifies himself with the legal profession. Asked about adapting the paralegal curriculum to suit the needs of the legal profession, he states, "I know how lawyers work. I've been one; I am one." This program chair's personal identification with the legal profession is bolstered by professional structures that encourage collegiality and enforce membership rules. Both personal and structural aspects foster and sustain the instructor's links to potential employers.

An accounting instructor, who is also chair of the business department at a community college, offers a similar example. He reports to be "intimately involved" with accounting firms in the city. "I keep an active communication with managers and partners," he continues, "because we're members of the American Accounting Association." Asked if this is part of his formal job description, he responds, "I consider that my responsibility, however, I don't think that that is part of my formal responsibilities in terms of my contract." Still, he also notes that "the goal is to prepare people to take the CPA exam," so participation in the formal professional association (which determines exam content) is reinforced beyond personal identification with the

broader profession.

Instructors in fields that lack a distinct professional association also feel compelled to stay abreast of developments in their occupational area. Yet for these instructors—in the absence of formal associations, shared culture, or professional requirements—their energies may yield fewer concrete linkages with employers than for instructors in fields with a distinct professional association. For example, instructors in CIS, business, and secretarial report reading trade publications to stay abreast of their respective fields. Such endeavors almost certainly ensure that instructors have some appropriate information on labor markets to share with their students; but information is only one useful aspect of linkages. Reading industry publications would not normally translate into actual contact with potential employers.

Of course, it is possible that the observed findings might be explained by personality characteristics, rather than the apparent professional association influences. Yet it is noteworthy that at our community colleges (where, as we have discussed, college structures do not promote linking), half (6 of 12) of the program chairs who engaged in high-level linking activity were from programs associated with a profession; whereas less than a quarter (2 of 9) of those coded as engaging in minimal linking were from programs associated with a profession.

Given the small size of the faculty interview sample, however, it is difficult to detect distinct patterning of labor market linking by program. Even when combined into groups of related departments, our sample often includes less than five respondents in most fields. Table 3 displays data from the four programs with the most respondents: business, computers, electronics engineering, and health. As Table 3 shows, chairs of

health programs—which are marked by relatively strict state-mandated rules for employment, including certification—show overwhelmingly high levels of linking activity (86% were coded as high linkers, while none were coded low). Instructors in business and computer fields—which are not governed by professional associations—show relatively low levels of linking (only about 30% coded high in linking, and over 40% coded low in each case). The role of professional associations in electronics and engineering programs is more difficult to assess. Some of the programs in our sample emphasize engineering, which is certainly governed by professional regulations, while others emphasize electronics, which is not.

Table 3: Level of linking activity by program type

Level of Linking	Business	Computer	Elec/Eng	Health	Others
Low	44% (4)	43% (3)	33% (2)	0	25% (3)
Medium	22% (2)	29% (2)	17% (1)	14% (1)	25% (3)
High	33% (3)	29% (2)	50% (3)	86% (6)	50% (6)
Total N	9	7	6	7	12

Source: Author's data. Actual N appears in parentheses.

STUDENT PERCEPTIONS OF CONTACTS

While most of the interest in college-employer contacts has centered on their usefulness in developing job-relevant curricula and in securing employment for students, this study examines whether college-employer contacts might influence students' motivation and persistence while they are still in school. Steinberg (1996) emphasizes that motivation may be enhanced by students' perceptions of curriculum relevance; but he does not consider what institutional actions might stimulate those perceptions and he has nothing to say about employer contacts. Tinto (1993) suggests that persistence is

influenced by extracurricular activities and living on campus (neither of which are common in non-residential two-year colleges), but he does not examine labor market contacts. Even some reforms that consider the motivating influence of careers do not involve contacts. For instance, career academies assume that by injecting career content into the curriculum, motivation is increased; but labor market contacts are not a necessary feature of academies (Stern et al., 1993). On the other hand, Hamilton and Hurrelman (1994) suggest that motivation may be increased by transparency of connections between school and the labor market, and they describe the ways that apprenticeship connections motivate German students.

With five-year degree completion rates at 26% in community colleges (and only 11% for African Americans; Bailey et al., 2002), motivation and persistence are clearly problematic issues that are fundamental to the existence and success of these institutions. In contrast, degree completion rates in private two-year colleges tend to be better (Brint, 2003). Indeed, while we only have records of degree completion rates at one of our occupational colleges, that one indicates six-year degree completion rates of 65% overall, and 57% for blacks. The present analyses examine how students vary in their perceptions of whether their faculty or college can help them get good jobs, and whether these perceptions may lead to improved effort in college and to fewer doubts about college persistence.

STUDENT SURVEY METHODS AND ANALYSIS

We administered a survey to 4,365 students in comparable core occupational classes in the 14 colleges in our sample. Classes were selected to maximize occupational

students (over 90% of survey respondents report an occupational major), as well as to include variation with respect to beginning and advanced students. Although a great diversity of students attend these colleges, by focusing only on students in comparable programs preparing for similar occupations, we are likely to be studying students with similar goals in the two types of colleges. Indeed, our analyses indicate that students in the two types of college are very similar in gender, age, and high school achievement, and despite higher tuition, the private college students are somewhat more likely to have parents with low income and less than high school education (Person and Rosenbaum, 2004). Finally, while many two-year college students are likely to face external obligations that might impede their college progress (e.g., jobs, children, etc.), we do not find that students differ systematically across the two college types in this respect. For example, while community college students report working slightly more hours per week, occupational college students are more likely to have dependent children.

The survey included a wide range of topics, many of which are reported in other papers (Person, Rosenbaum, and Deil-Amen, forthcoming a; Person and Rosenbaum, forthcoming b). Some of these include students' family background, education and work history, current college experiences, and their goals and aspirations for the future. Regrettably, we did not anticipate the professional association finding reported above, so no questions were asked about that either to students or program heads.

We asked students for their perceptions of the benefits of college and teacher contacts with employers. The present analyses focus on two key independent variables, which show the potential influence of students' responses to two items: (1) "My teachers' contacts could help me get a good job"; and (2) "My college's contacts could help me get

a good job.” Student responses were on a five-point Likert scale with 1 = “strongly disagree” and 5 = “strongly agree”. Using OLS regression, we examined two outcomes: (1) Changes in student effort versus in high school; and (2) the extent to which the student had considered dropping out of college. Since students in our sample are clustered within classrooms in schools, it is necessary to adjust for potential correlation in the data. Toward this end, we employed Huber-White statistical techniques (using the robust cluster commands available with Stata software) and report the resulting robust standard errors in the table that follows. The Huber-White adjustment does not affect the regression coefficients, but adjusts standard errors to account for potential non-independence of observations.

For our first analysis, we examined changes in student effort versus when they were in high school. Students were asked, “Compared to when I was in high school, my effort now is...” with responses ranging from 1 = much lower, to 5 = much higher on a five-point scale. In Table 4 (see below), the first two columns (Models 1 and 2) report the influence of a host of variables on changes in student effort since high school. Following the lead of prior research on student college completion, we control for several independent variables: gender, race, age (and age-squared to capture non-linear effects), high school achievement, and parent education. Given the patterns identified in our qualitative analyses, we also control for college type (i.e., public community college or private occupational college).

Table 4:
OLS regression of student outcomes on individual and institutional variables
(unstandardized coefficients)

	Effort vs. HS		Considered Dropout	
	b		b	
	(robust SE)		(robust SE)	
Model	1	2	3	4
Male	-.080** (.026)	-.080** (.026)	-.016 (.022)	-.016 (.022)
African American	.109** (.035)	.098** (.035)	.030 (.031)	.035 (.031)
Latino	.089* (.036)	.095** (.035)	.017 (.030)	.015 (.030)
Asian	-.013 (.047)	-.019 (.046)	-.013 (.035)	-.010 (.034)
Other (non-white)	.268 (.201)	.250 (.191)	.182 (.193)	.191 (.188)
Age	.053*** (.010)	.057*** (.010)	.019** (.007)	.017* (.007)
Age-squared	-.0007*** (.0001)	-.0007*** (.0001)	-.0003** (.0001)	-.0003* (.0001)
HS grades	-.264*** (.019)	-.260*** (.019)	-.037* (.016)	-.039* (.016)
Parent education	-.002 (.010)	-.003 (.010)	-.014 (.008)	-.013 (.008)
Occupational college	.139*** (.027)	.082** (.028)	-.128*** (.023)	-.098*** (.024)
Teacher contacts		.053*** (.016)		-.035** (.013)
College contacts		.081*** (.017)		-.037** (.014)
Constant	4.042	3.547	1.343	1.606
R ²	.082	.100	.012	.021

Source: Authors' data. $N = 4,150$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Gender predicts the outcome, with females showing significantly greater increases in effort versus males (Model 1). African American and Latino students also experience greater positive change in effort than their white counterparts (the omitted category). Age, too, is a significant predictor of improved effort, though the relationship is

curvilinear (indicated by the positive direction of age and the negative direction of age-squared), with the positive effect dropping off between about 38 and 40 years in the two models. High-school grades are negatively associated with increased effort, which makes sense, given that those students with high achievement in the past are likely to have exerted a great deal of effort during high school. Parent education shows no significant influence. Finally, private colleges are associated with significant effort increases. As Model 2 shows, however, this private college influence is partly explained by students' perceptions of college and teacher contacts, both of which are strong and significant, and which reduce the coefficient on private school by over 40% of its prior magnitude (Model 2 versus Model 1).

Next students were asked, "In the past year, have you ever considered dropping out of college?" with responses given on a four-point scale ranging from 1 = not at all, to 4 = very seriously. Gender, race, and parent education show no significant influence on consideration of dropping out (Model 3). Age again shows a significant curvilinear relationship with the outcome, with increased thoughts of drop-out peaking between 28 and 31 years in the two models (3 and 4). Better high-school grades are associated with less consideration of dropping out. And finally, private colleges are associated with a strong and significant reduction in students' thoughts of dropping out. In Model 4, we find that college and teacher contacts again have an impact in reducing dropout thoughts, and they again account for a fairly large part of the influence of private schools.

As these analyses indicate, students' perceptions of college and teacher contacts have potentially important influences: They are associated with improved student effort versus high school and fewer thoughts of dropping out of college. Moreover, the

perceived benefits of contacts partly account for the positive influence of private colleges.

Of course, many students in two-year colleges aspire to transfer to four-year colleges, and this is true even for many of the students in our sample. It is commonly assumed that labor market contacts may be unimportant for the motivation of students with Bachelor's degree plans. However, from interviews with students (part of the larger study, but not treated systematically in the current analyses), it was our impression that many students with BA plans are concerned about the potential job payoffs of their two-year degrees, either because of an interest in getting a better job while pursuing the BA or because of uncertainty about whether they will succeed in completing the BA.

We repeated the above analyses, restricting the sample solely to students with BA plans or higher. These analyses (not reported here) yielded virtually the same pattern of influences. Even for students with BA plans, the perceived usefulness of labor market contacts in securing a job is linked to positive changes in student effort and reduced doubts about college persistence.

We must caution that it is possible that students who seek out teachers or colleges with job contacts may differ in unmeasured ways. However, we have conducted extensive analyses and have been unable to detect such prior differences. Moreover, the dependent variables in these analyses represent behavioral changes that have occurred over time, since the student began at the college, supporting inferences that changes are related to college attributes. What we have found are some teachers and colleges with strong contacts with employers, which can help graduates get jobs. Our interviews and surveys indicate that students see these contacts, and students report that these contacts

give them confidence that their efforts will pay off in better jobs. The present analyses indicate that students respond with greater efforts to attain these benefits. While unmeasured student differences may conceivably explain some portion of these effects, we would be surprised if these contacts had no impact. Indeed, anyone hearing students' statements would have difficulty doubting the impact contacts have on some students. An illustrative example comes from an IT major at one of our occupational colleges:

“If you're ever feeling down, I mean, there have been times when I've been kinda depressed between my job, the economy's so horrible, we're spending all this money for school, and actually had an instructor say, 'Come here,' take us into a lab, go to a website and say, 'what's your specialty?' type it in, and on the website it's showing the baseline salary and the requirements they need for it. He's like, 'This is what you're working for.' You know, that makes you feel good! [laughs] So, it's nice.”

She continues, “...by the time that you graduate, you'll have a very full working knowledge of exactly what the industry's looking for, because they [the teachers] are coming from the industry... so they know exactly what, you know, the jobs they're looking for. That is so helpful. It really is.”

CONCLUSION AND FUTURE DIRECTIONS

This paper has examined school-employer linkages at two different levels—department chairs' linkage activities and students' perceptions of the benefits of contacts. Department chairs report several institutional factors which influence whether and how they try to forge employer linkages, and we find that occupational colleges, which tend to have more structural practices that encourage linkages, have more program chairs who initiate and maintain such linkages than do community colleges. Department chairs also report ways that professional associations facilitate such linkages, and we find that occupational fields with such associations are more likely to have such linkages.

We have also discovered that students' perceptions of the potential benefit of college and teacher linkages significantly predict students' increased efforts at school and decreased doubts about college persistence. Students' perceptions of linkages account for part of the influence of private colleges, even for students with BA plans. While we lack information on these students' ultimate degree completion, we suspect it may be related to the indicators we have analyzed. In any case, for these students, many of whom had poor high-school achievement and little family exposure to college, if linkages improve their efforts in college and reduce their doubts about completion, those are real accomplishments.

Despite the scope of the present analyses, we have ignored several processes. First, while we have shown differences in chairs' contacts between the two types of institutions, we have not looked at college differences within each type of college. Nor have we looked at more centralized traditional contacts, for instance through the career services office (for discussion of these services, see Deil-Amen and Rosenbaum, 2004). Finally, while our students report their perceptions of likely benefit from contacts, we have no data on students' actual use of contacts, much less whether or not their use indeed proves to be beneficial. These issues require further examination. More detailed student questions, surveys with data on institutional practices, and longitudinal data on student outcomes would greatly advance our understanding of these questions.

These results suggest the potential for improving program effectiveness. Our qualitative findings may be useful if programs seek to increase faculty-employer linkages. For instance, our interview data suggest that the benefits of adjunct faculty may be more mixed than is usually considered, and the isolation of career services encourages

some faculty members to conclude that labor market links are not something they should be concerned with. In all of these community colleges, top administrators have emphasized occupational preparation, much like the top administrators in prior studies (Brint and Karabel, 1989). However, our analyses have found many examples where the enthusiastic words of community college presidents are not accompanied by corresponding actions of occupational program chairs. Colleges may need to make special efforts in fields where professional associations do not exist. Finally, while colleges often try to improve student motivation and persistence through instructional techniques and special services, these findings suggest that college and faculty contacts with employers may also be powerful influences.

Several policy implications are suggested if these results are replicated by subsequent research. First, our findings suggest that college structures and professional associations can influence faculty's labor market contacts. Second, they suggest that labor market contacts can clarify the steps in the school-to-work transition, improving students' efforts in college and reducing their thoughts of dropping out. In sum, this study suggests that when students see faculty and college contacts with the labor market, they may experience positive outcomes that will improve their college success.

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